Advancing Pedestrian Safety Using Education and Enforcement In Pedestrian Focus Cities and States: Chicago

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5. Authors James Considine, AICP, PTP; Ron Van Houten, Ph.D.; Tim Gustafson, AICP; David Smith and Suzanne Carlson	**6. Performing Org. Report No.** 602542.2
7. Performing Organization Name and Address T.Y. Lin International 200 South Wacker Drive, Suite 1400 Chicago, IL 60606	**8. Agreement No.** DTNH22-09-4-00281
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12. Abstract The City of Chicago Department of Transportation (CDOT) has extensive programs to improve walking as a transportation mode. These programs involve encouraging pedestrian activity through engineering, enforcement, education, and encouragement. This document summarizes CDOT efforts, funded by NHTSA, to improve pedestrian enforcement and education. The goal of the project was to reduce pedestrian crashes. Project specific objectives were to increase public attention towards pedestrian safety, further develop the Chicago Police Department (CPD) ongoing pedestrian safety enforcement program, and increase pedestrian safety awareness within the CPD.	
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Overview

This project was one of four cooperative agreement awards made by the National Highway Traffic Safety Administration to promote pedestrian safety education and enforcement programs in pedestrian focus cities and States. As devised by the Federal Highway Administration (FHWA), cities were identified as pedestrian focus cities if they had more than 20 average annual pedestrian fatalities or a pedestrian fatality rate greater than 2.33 per 100,000 population. States with a focus city were automatically identified as focus States (FHWA, 2012).

Chicago was one of four NHTSA cooperative agreement recipients. The remaining three recipients included:

- Florida Department of Transportation
- New Mexico Department of Transportation and
- University of North Carolina Highway Research Center in conjunction with the North Carolina Department of Transportation

Both NHTSA and FHWA believe in a "comprehensive approach" to pedestrian safety to reduce pedestrian crashes, injuries, and fatalities. Therefore, the funding of these agreements was to complement existing or planned pedestrian engineering treatments to improve infrastructure over the course of three or four years.

Each cooperative agreement recipient was funded by NHTSA to include three main elements:

1. A developed implementation plan for education and enforcement to enhance or improve pedestrian safety with a comprehensive approach. The intervention would be designed for easy implementation and replication in other cities or States;
2. Use of community pedestrian safety data as a targeting tool to implement and deploy education and enforcement in conjunction with infrastructure changes, which would be part of a pedestrian safety action plan; and
3. A report of the education and enforcement activities planned and implemented, including outcome and process measures, and a summary of lessons learned and recommendations.

Each project provided a separate report. The following represents a final report from Chicago Department of Transportation.

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1. Introduction

1.1 Background

The City of Chicago Department of Transportation (CDOT) has extensive programs to improve walking in Chicago. This involves encouraging pedestrian activity through engineering, enforcement, education, and encouragement. This document summarizes CDOT efforts to improve pedestrian enforcement and education.

The goal of the project was to reduce pedestrian crashes through the following project objectives:

- Increase public attention towards pedestrian safety;
- Further develop the Chicago Police Department (CPD) ongoing pedestrian safety enforcement program;
- Increase awareness of pedestrian safety within the CPD through the development of a training curriculum and associated support material; and
- Integrate this effort into the overall CDOT pedestrian encouragement program.

This report summarizes the activities and results of a pedestrian safety awareness campaign conducted by Chicago from 2010 to 2012. It includes the results, findings, and lessons learned which can be applied to future efforts both by Chicago and other jurisdictions. The campaign consisted of three primary elements:

- A pedestrian crash analysis (conducted in 2011);
- A public awareness campaign (begun in 2011 and continued throughout 2012); and
- Police training in pedestrian safety and high-visibility enforcement of motorists in relation to pedestrian crossings (part of an ongoing traffic safety effort begun in 2009, prior to the beginning of this NHTSA-funded pedestrian safety awareness campaign).

  This current project funded developing and providing training material for all CPD about pedestrian crosswalk enforcement and overtime enforcement for high-visibility enforcement missions.

1.2 Chicago Department of Transportation

CDOT encourages walking through planning, investment, education, and advocacy. The Pedestrian Safety Awareness Campaign was developed within the context of the overall CDOT pedestrian program, which includes the following:

- ***Mayor's Pedestrian Advisory Council:*** MPAC is an interdisciplinary body of stakeholder groups and local, State, and Federal representatives. The group focuses on safety, public awareness, enforcement, and infrastructure investments. In addition, other city departments work with CDOT in order to improve the pedestrian environment, including the Chicago Police Department, the Mayor's Office for People With Disabilities, and the Department of Family and Support Services.

- ***Pedestrian Plan:*** CDOT released the *Chicago Pedestrian Plan* in September 2012. The *Pedestrian Plan* is a comprehensive set of recommendations for pedestrian safety and comfort. The *Pedestrian Plan* identified new opportunities and initiatives that will strengthen Chicago's robust pedestrian environment. The purpose of the *Pedestrian Plan* is to improve the pedestrian experience and increase pedestrian activity.

- ***Safe Streets for Chicago:*** Launched in October 2006, this comprehensive initiative includes coordination with the Office of Emergency Management and Coordination (OEMC) and the CPD to implement public safety messaging and enforcement efforts. The efforts include deployment of a traffic team, a LIDAR speed-gun system, and a public awareness campaign.

- ***Safe Routes Ambassadors:*** Safe Routes Ambassadors serve as the City's pedestrian and bicycle safety outreach team. The free city service provides in-class presentations, on-foot training, and workshops for school organizers.

- ***Safe Routes for Seniors:*** This senior walking encouragement and safety program focuses on the unique perspective of senior pedestrians and conducts presentations at senior centers, senior residences, and health fairs.

- ***Engineering Approaches:*** Countdown timers were installed at numerous signalized intersections; signal timing was adjusted to allow for leading pedestrian intervals and increased pedestrian crossing time; refuge islands/curb extensions were built to help reduce the crossing distance for pedestrians; and traffic-calming designs were implemented to "calm" vehicular traffic by encouraging slower and safer driving behaviors (TYLI, 2011a). In July 2012, CDOT installed 50 four-foot-high signs to indicate the need to stop for pedestrians in crosswalks (CDOT, 2012).

- ***Complete Streets Policy:*** The City of Chicago Complete Streets Policy was adopted in 2006. The policy provides for accommodations for all transportation users, including pedestrians, bicyclists, transit users, and motor vehicle drivers. The intent of the policy is to ensure that the most vulnerable groups of people are able to travel safely in the public right-of-way (ROW).

- ***Complete Streets Chicago Design Guidelines:*** CDOT issued *Complete Streets Chicago Design Guidelines* in 2013. The intent of this manual was to ensure the safety and convenience of all users of the transportation system. CDOT adopted a pedestrian-first modal hierarchy. In this model, all transportation projects and programs would be designed to favor pedestrians first and then transit riders, cyclists, and automobiles.

- ***Enforcement Campaign with CPD:*** CDOT teamed with the CPD to improve pedestrian safety through crosswalk enforcement initiatives. The crosswalk awareness initiatives involved off-duty police officers posing as pedestrians crossing at crosswalks. If oncoming drivers did not stop for the pedestrian, as required by law, the vehicle was pulled over by a police spotter further down the street. The current crosswalk awareness initiative is funded through a grant from the Illinois Department of Transportation (IDOT).

2. Crash Analysis

2.1 Background

The first element of the project involved preparing a citywide pedestrian crash analysis. The analysis provided pedestrian crash demographic information for the marketing campaign and location information to target enforcement efforts. The information also was useful for preparing the *Pedestrian Plan*, which was being developed as an ancillary effort while the pedestrian safety initiative project was underway.

2.2 Methodology

The crash analysis built upon a previous University of North Carolina Highway Safety Research Center study that evaluated data from the 2001 through 2005. For this project, crash data from IDOT was collected for all traffic crashes in Chicago from 2005 to 2009.

The data was analyzed to determine which vehicle crashes involved pedestrians. Once identified, information was gathered from the crash files to determine the demographics of the people involved, the times when the crashes occurred, and the crash locations. Roadway lanes, traffic control, and land use data were provided by the Chicago Department of Innovation and Technology.

The United States Census data from the 2005-2009 American Community Survey (ACS) also were used. Statistical analyses were performed on the crash data to identify relationships to demographic, temporal, geographic, environmental, and behavioral factors. In addition, national data on pedestrian crashes was used as a

comparison to the Chicago data. National pedestrian crash statistics were obtained from NHTSA and its Fatality Analysis Reporting System (FARS).

The crash analysis included a summary report and technical report titled, *City of Chicago, 2011 Pedestrian Crash Analysis*, which are included as Appendix A and Appendix B. The reports also are available on the campaign Web site at http://chicagopedsafety.org/resources and www.chicagocompletestreets.org.

2.3 Results

Some of the significant findings from the pedestrian crash analysis are:

- Overall pedestrian crashes have been trending downward since 2001.
- There were 34 pedestrian fatalities in 2009, a 16-year low.
- Pedestrian crashes occur most often between 3 p.m. and 6 p.m.
- Taxi involvement in pedestrian crashes in the Downtown area was 28 percent.
- Half of the fatal and serious injury crashes occurred on arterial roadways, which account for only 10 percent of the street miles in Chicago.
- Three-quarters (75%) of all crashes occur in or near intersections.
- More than half of crashes at signalized intersections involve turning vehicles.
- In an examination of various factors including crime, income, race, language spoken, and Walk Score, the strongest correlation was between pedestrian crashes and crime.
- One-third of pedestrian crashes are hit and runs.

The highest density of pedestrian crashes occurred in the Downtown and Near North areas. Pockets of high-density crashes were scattered throughout Chicago. The crash analysis was able to identify corridors with high pedestrian crashes. Additional findings from the crash analysis can be found in the reports.

2.4 Use in Next Steps of Project

The crash analysis provided the background information for the pedestrian awareness campaign. The report identified the most common factors associated with pedestrian crashes. From the crash analysis, populations, behaviors, and locations were identified to focus campaign efforts, as shown in the table below. Target categories involved multiple geographic locations, population groups, and cultural or behavioral influences. The target information was also useful in identifying locations where engineering solutions could be applied and preparing the *Pedestrian Plan*.

Target	Category
All Age Groups	Population
Arterials-Main Roads	Location
Downtown	Location
Drivers Turning Left	Behavior/Location
Neighborhoods	Location
Uncontrolled Crosswalks	Location
High Crash Corridors	Location
High Crime Areas	Location/Behavior
Hit-and-Run Drivers	Behavior
Intersections	Location
Young People	Population/Location
Seniors	Population/Location
Taxi Drivers	Population
Temporal Peaks	Behavior
Transit Stops/Stations and Users	Location/Population/Behavior

2.5 Findings

The pedestrian crash analysis was the most important aspect of the pedestrian campaign since it identified the target populations and behaviors for subsequent activities undertaken during the pedestrian safety campaign. Because data changes over time, it is important to conduct a crash analysis every 5 years to observe and adjust to changing trends. This is useful in determining how factors affecting pedestrian crashes change. It would also be useful to determine the success of the ongoing City efforts to make Chicago more livable and safe for pedestrians. Finally, the analysis provides background that is needed to direct the city's effort in regard to education, enforcement, and engineering.

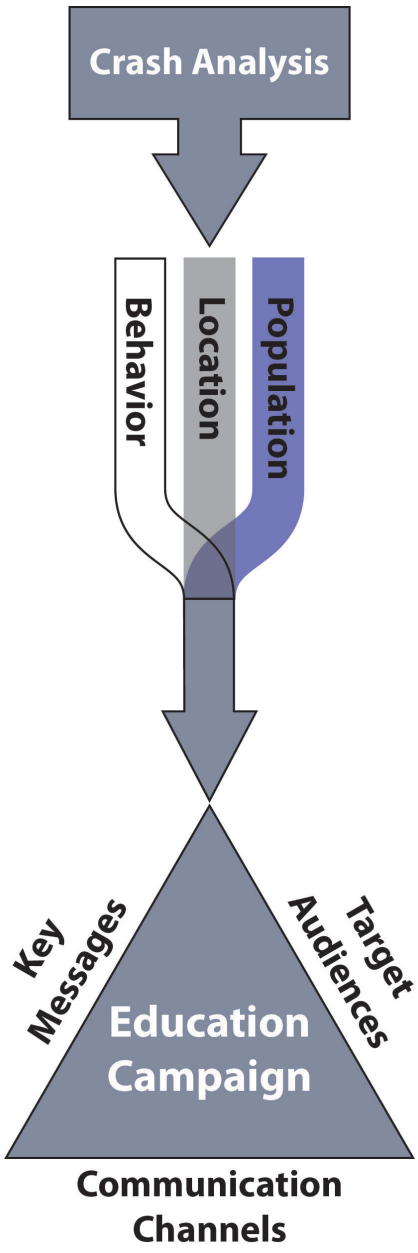
3. Marketing Campaign

3.1 Background

Three objectives were established for the marketing campaign:

- To raise people's awareness of Chicago's pedestrian crash rates and the key driver and pedestrian behaviors that cause these crashes;
- To educate drivers and pedestrians of the laws in place to combat pedestrian crashes; and
- To create measurable behavioral shifts among pedestrians and drivers.

The media campaign resulted in a targeted effort to make people aware of the potential dangers associated with motorist/pedestrian interactions with particular focus on the vulnerable nature of the pedestrian. In developing the marketing campaign, three things were considered: the audience, the message, and the communication channels. The audience consisted primarily of the whole of Chicago, since everyone is a pedestrian at some time. Still, there were certain populations and locations that needed to be targeted based on the results of the crash analysis.



Developing the key messages proved to be an arduous task. Initially, the project team developed a primary theme of "See You, See Me." This theme was intended to bring attention to pedestrians through sunglass-wearing celebrities. However, in the course of developing the campaign, it was decided that it did not adequately address the serious nature of fatalities and injuries that result from pedestrian crashes.

The marketing campaign developed a new theme of "It's Up to You. Be Alert. Be Safe." This theme would use striking graphics and representations of pedestrian crash injuries or fatalities to advance the message that pedestrian safety and awareness is important.

The marketing campaign also was limited by the budget for advertising. Early on, it was decided that the program needed to develop partners to carry the messages. A public agency such as CDOT can often create news just by the actions that it takes, or "earned media." The project team wanted to develop a marketing campaign that would draw attention to its actions and have the media carry the message. The marketing campaign used several communication channels to catch the attention of pedestrians and drivers. The marketing campaign also relied on media outlets to promote the key messages.

3.2 Methodology

The first step in the marketing program was to create a main campaign theme and associated key messages. A hard-hitting theme was created that asked drivers and pedestrians to take responsibility for pedestrian safety with the theme, "Be Safe. Be Alert. We're All Pedestrians."

It was decided to create a "big event" that would portray to the media the city's new theme to improve pedestrian safety. The big event used "ghost" mannequins to represent people killed in pedestrian crashes along with a press conference to introduce the campaign.

In addition, key messages were developed that targeted drivers and pedestrians, and in particular, children, young adults, and seniors. These messages emphasized the dangers associated with pedestrian crashes and the behaviors that cause crashes. The messages were tied with graphics that would be used to deliver the messages beyond the initial big event. The graphics are included in Appendix C – Marketing Campaign Material.

The marketing material was placed throughout Chicago and incorporated into events held by CDOT. Public devices were used to portray the marketing material. These included images placed on "Big Belly" solar trash compactors and bus backs; sidewalk applications; pedestrian flags; and taxi bumper stickers. These installations are explained in more detail below.

A campaign Web site (http://chicagopedsafety.org) also was created to provide information about pedestrian safety, including the results of the crash analysis. The Web site also includes copies of the marketing materials, press releases, and photographs of the installations. The Web site is linked to Chicago's pedestrian safety laws and the *Chicago Pedestrian Plan*.

The big event and the installations had the expected reaction of gaining the attention of the media and promoting the messages of the campaign. The project team tracked the appearance and/or mention of these materials in news stories, television programs, internet articles, and blogs. The reaction of the media and the public to the marketing campaign is discussed below.

3.3 The Big Event: Kick-Off and Use of the Mannequins

In October 2011, the marketing campaign kicked off in downtown Chicago with an outdoor press conference. The event was held at the busy corner of Wacker Drive and Wabash Avenue. Speakers included representatives from CDOT, CPD, IDOT, and NHTSA.

Thirty-two faceless "ghost" mannequins were installed in planter boxes along a half-mile stretch of Wacker Drive. Each mannequin represented one of the 32 pedestrians who were killed as a result of pedestrian crashes in 2010. Each wore a shirt bearing the phrase, "One of 32 pedestrians killed last year in Chicago." The backside of each shirt also bore the campaign theme of "It's Up to You. Be Alert. Be Safe." This display was highlighted in news stories through television spots on the local news channels, newspaper articles, and Web-based stories.

After the campaign launch, the mannequins were relocated throughout Chicago at transit stations along the CTA Blue and Red lines. The mannequins also were moved to other indoor locations for the winter months. The intent of the relocation was to sustain the campaign's engagement and to educate a large number of Chicago commuters.

Following the initial installations, the continued presence of the mannequins provided a stir in media clips. Stories at ABC News, the Associated Content, CBS Chicago, the *Chicago Tribune*, the Chicagoist, Fox News Chicago, NBC Chicago, The Officer, Radio Reporting, Redeye, and WGN News, among others, featured the efforts of the campaign.

The installation of the mannequins drew notable amounts of media attention in a short time. An Internet search identified at least eight news outlets that picked up the installation of this signage, including a video of the new signage on the CDOT Web site.

Images of Mannequins
Source: TYLI

A sample of the articles in which these installations were described is included in Appendix D – Media Coverage.

3.4 Print Media

Posters were created to carry the message of the campaign. The posters were placed on Big Belly solar trash compactors and bus backs. In addition pedestrian flags, taxi-bumper stickers, and sidewalk applications were developed to target populations, behavior and locations. All the material and installations were created to convey the campaign theme and allowed for directed campaign efforts at specific locations.

3.4.1 Big Belly Posters

Big Belly solar trash compactors were selected as media for installing the campaign posters. The Big Belly" compactors are owned by the city, which provided a low-cost forum for displaying the campaign posters. The compactors are highly visible to pedestrians due to their locations at major intersections. The Big Belly posters were installed at more than 100 locations, primarily in the Downtown. As previously mentioned, the Downtown had the highest number of pedestrian crashes in the city.

These installations consisted of large, eye-catching posters bearing campaign images and slogans. The posters were placed strategically on the front and sides of the trash compactors to illustrate driver and pedestrian behaviors. Both horizontal and vertical posters were created for the Big Belly displays. Additional images of the posters are included in Appendix B – Marketing Campaign Material.

Images of the Big Belly Trash Compactors
Source: TYLI

3.4.2 Bus Backs

The Chicago Transit Authority (CTA) buses provided a means of displaying the graphic posters geared toward motorists as well as pedestrians. The city had an agreement with CTA that allowed for advertising space on the buses. Three images were created for the placement on the backs of CTA buses. The images included a mixture of photographs and text to illustrate poignant facts about pedestrian crashes. The images also included the campaign theme and Web site.

Ads appeared as taillight displays on 35 buses along nine CTA bus lines. Four routes were focused on due to their presence in high-crash corridors. These routes included Madison (Route 20), Cicero (Route 54), Chicago (Route 66), and Division (Route 70). The ads were displayed for eight weeks.

The placement of these images on moving vehicles allowed for more exposure than the stationary installations. The placement of bus backs provided wide coverage through CTA's extensive bus route network, which targeted drivers as well as pedestrians along bus routes. Additional images of the individual posters are provided in Appendix C – Marketing Campaign Material.

Images of Bus Backs
Source: TYLI

Pedestrian Flags

Crosswalk safety flags were devised to help improve the visibility of pedestrians to drivers when crossing the street at unsignalized crosswalks. The pedestrian flags were placed in plastic bins at 10 of Chicago's most dangerous pedestrian intersections on the west and south sides in December 2011. Sites were identified by CDOT as pedestrian crossing conflict locations near schools, parks, senior centers, or other community destination. CDOT officials were on hand to assist pedestrians with the use of the flags at the launch of the campaign. Additional information on the safety flags can be found in Appendix C – Marketing Campaign Material.

The flags were used by people crossing the streets to notify oncoming motorists of their presence within marked and unmarked crossings. Pedestrians would take a flag at the start of the crossing and place it in the bin on the other side of the street. The flags would be transported back and forth across the streets as participants crossed. The flags were intended to improve motorist yielding behavior and reduce risk of crashes.

Pedestrian Flags
Source: TYLI

Use of Pedestrian Flags
Source: TYLI

As indicated in Web articles, one of the challenges in using the pedestrian flags was keeping them in the correct location. The pedestrian flags were easy targets for theft (Greenfield, 2011). While the pedestrian flags were used for a short period of time, their use generated media attention as described in Appendix D – Media Coverage.

3.4.3 Taxi Bumper Stickers

Taxi bumper stickers were created as part of the marketing effort. As previously mentioned, taxis were involved in a high number of pedestrian crashes in the Downtown. CDOT worked with the Chicago Department of Consumer Affairs to develop and distribute the bumper stickers. While the bumper stickers were generated from the pedestrian safety campaign, they were designed to be

universal in reminding pedestrians and passengers to call the city's 311 Call Center and report both negative and positive experiences with taxis. The stickers were tagged with the campaign branding, including the theme and logo.
In 2012, approximately 6,892 stickers were distributed and the city taxi licensing department ensured taxi companies applied the stickers to their fleets.

Image of the Taxi Bumper Sticker
Source: TYLI

Use of Taxi Bumper Sticker
Source: TYLI

The bumper stickers were discussed in Web articles and news clips in outlets, such as WGN, the Chicago Sun-Times, ABC, and NBC. See Appendix D – Media Coverage for the Web article and news clips.

3.4.4 Sidewalk Applications

As part of the Pedestrian Safety Awareness Campaign, CDOT installed 100 sidewalk applications at the corners of high-crash intersections to help increase pedestrian safety. Before and after installation observations were conducted at select intersections to assess the impacts on pedestrian behavior. Observations were conducted at the following intersections:

- Canal St. and Madison St.,
- Cicero Ave. and Madison St.,
- Dearborn St. and Erie St.,
- Dearborn St. and Madison St., and
- Dearborn St. and Ohio St.

Applications were installed in the Downtown and at high-crash intersections outside of the Downtown. CDOT installed 100 sidewalk applications at either two or four corners of each intersection. The messaging was consistent with the campaign themes.

Images of Street Applications
Source: TYLI

Data was collected for 40 traffic signal cycles approximately two weeks before and four weeks after installation of the sidewalk applications. Observations were made at sticker locations; control locations were not used. Observers recorded if pedestrians entered the crosswalk with the walk signal, flashing don't walk signal, or solid don't walk signal. Additionally, near-conflicts between pedestrians and motorists were recorded. A near-conflict was recorded when a pedestrian or motorist made a sudden adjustment (i.e., jump out of the way, suddenly brake, or swerve) to avoid a crash at the intersection. The data shows little change in typical pedestrian crossing behavior after the applications were installed, with the following results:

- Pedestrians crossing with the "Walk" signal decreased 3.8 percent;
- Pedestrians crossing against a flashing "Don't Walk" signal increased 3.8 percent; and
- Pedestrians crossing against a solid "Don't Walk" signal remained consistent.

3.5 Media Coverage

Within a 4-month period after the opening press conference, over 6 million media impressions (i.e., the number of people who may have seen an article, heard a news story, or read something on a Web site) were recorded, resulting from at least 53 significant placements in print, broadcast, radio, and online outlets. Among these placements were stories in the 5 major Chicago television outlets, 2 major Chicago newspapers, and more than 20 online/blog sources.

In addition, approximately 300 Twitter updates were recorded within the first 3 days of the campaign, followed by more than 200 Facebook "likes" and more than 1,000 shares with other social media sites. The installation of the mannequins generated the largest reaction in these various media outlets. The marketing campaign generated positive media and public support of the city's intentions to improve pedestrian safety and awareness. Additional information can be found in Appendix D – Media Coverage.

3.6 Unused Campaign Material

The development off the campaign theme included two iterations. The initial theme focused on positive outreach with the theme "See You, See Me." This initial theme was intended to bring attention to pedestrians through the use of sunglass-wearing celebrities.

Material was created for the original iteration of the CDOT pedestrian safety campaign "See You, See Me." It was felt that this theme would not generate enough media support and visual attention. The material that was generated as part of the first iteration was not distributed. This material is provided in Appendix E - Unused Marketing Campaign Material, as it may be useful for other future pedestrian safety efforts.

3.7 Findings

The crash analysis provided information that was used to target population and locations. It also provided an understanding of behaviors and environmental features (roadway types and time of day, etc.) that contributed to pedestrian crashes. The marketing campaign was tailored to address the target population, locations, and behaviors.

The marketing campaign needed a message that was simple and clear. The main theme was based on a message that pedestrian safety is a serious issue and "Be Alert. Be Safe. We're All Pedestrians." The message conveyed the idea that drivers need to give pedestrians respect and recognize that the road is a shared space. Furthermore, the message would reinforce the law that requires motorists to stop for pedestrians in crosswalks or at signalized crosswalks where pedestrians have a green light.

With a limited budget, CDOT relied on media attention to ensure the most exposure for the least cost. While the overall campaign received media attention, the portions of the campaign that involved active and intentional notifications to the press were the elements that created the most notable media stir and discussion. These components consisted of the mannequins and pedestrian flags. Both were reported as sequential steps within a larger program to the media.

The mannequins and pedestrian flags installations were the more unique components of the campaign and attracted the most media attention. Through a brief survey of Web-based resources, in fall 2012 through winter 2013, nearly 60 percent of media citations concerned the mannequins, followed by pedestrian flags (21%).

- The mannequins drew attention because of their coverage at the campaign kick-off press conference (October 2011) with the mannequin display on

Wacker Drive. Their physical presence created a visual draw that continued throughout the fall (and some are still up).

- The pedestrian flags also were a focus of attention due to the nature of their use (i.e., designed to capture drivers' attention) and also by encouraging people to actively participate in the campaign through the use of the flags.

Readily available communication channels were important to getting the word out. Graphic posters were placed on Big Belly trash bins and CTA bus backs at no cost to CDOT. It was easier to develop and install the mannequins, on-street applications, and the pedestrian flags because items in the public right-of-way are under CDOT jurisdiction. Likewise, CDOT could work with the Chicago Department of Consumer Services to develop and distribute the bumper stickers for the taxis. The city ensured the stickers were applied.

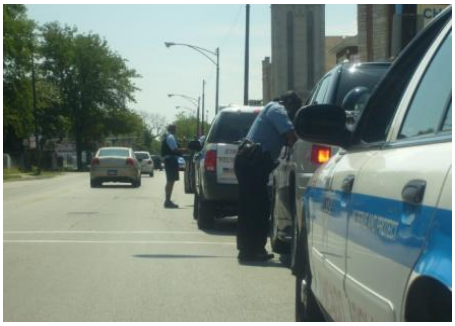
4. Crosswalk Safety Enforcement Campaign and Education

4.1 Enforcement Background

The city developed a pedestrian crosswalk enforcement program prior to this project, to educate the general public (motorists and pedestrian) on pedestrian safety laws. In 2008, CDOT began working with the CPD Traffic Section to create a high-visibility enforcement campaign staged at uncontrolled crosswalks. Uncontrolled pedestrian crosswalks are crossings without signalized controls or stop signs on one or more legs and generally occur mid-block or at T-intersections. "High-visibility enforcement" in this case refers to the use of signage, cones, and media attention to raise awareness and encourage compliance beyond motorists who receive citations.

The enforcement effort consisted of one or two plainclothes law enforcement officers who served as "decoy" pedestrians, two to three squad cars for chase, and signage alerting the community that a pedestrian safety mission was being conducted. Missions were conducted at uncontrolled, marked crosswalks with high volumes of pedestrian crossings, often close to schools, parks, or commercial activity.

Decoy pedestrians followed a protocol for the operation, see **Section 4.3,** but basically stepped into crosswalks to see if drivers stopped for them. Drivers failing to stop were cited by awaiting patrol cars. Other citations were given when applicable, including violations of seat belt laws, suspended driver licenses, and insurance requirements. Offenders were also given background information on safety laws for pedestrians and drivers.



High-Visibility Enforcement Campaign
Source: TYLI

The initial enforcement campaign resulted in extensive media attention. The local media outlets covered the enforcement efforts and reported on the city's commitment to improving pedestrian safety. Local media has continued to follow the efforts of CPD and CDOT in the subsequent years, but to a lesser extent.

CPD High-Visibility Enforcement Campaign
Source: Chicago Sun-Times, 2008

CPD High-Visibility Enforcement Campaign
Source: Chicago Tribune, 2009

The CPD has continued with enforcement activities since 2008. The table below shows the number of enforcement missions and citations issued since 2009. The majority of the citations (80%) were issued for "failure to stop for pedestrians in crosswalk." Citations also were issued for suspended driver's license, no driver's license, no insurance, and speed violation, in that order.

Chicago Police Department
Uncontrolled Crosswalk Enforcement Summary

Fiscal Year	Enforcement Missions	Citations Issued	Crosswalk Violations	Other Violations
2009	62	2,074	1,540	534
2010	59	1,177	1,001	176
2011	42	881	801	80
2012	59	1,208	1,041	167
2013	27	656	540	116

The CPD Traffic Section, responsible for conducting the high-visibility enforcement campaign, is a specialized unit within the Bureau of Patrol that supports law enforcement in the city's 25 police districts. Pedestrian safety enforcement is conducted by the Traffic Section when funding is available. Enforcement locations are determined by CDOT using crash data, and may also be conducted at the request of the alderman or community groups.

CDOT also wanted to engage officers beyond the Traffic Section, to include District level officers, to provide high-visibility enforcement missions more often in more locations. However, financial resources were limited and other police priorities made this difficult to implement. CDOT felt that, at a minimum, providing education to law enforcement on pedestrian safety was a good step toward engaging and encouraging officers to enforce pedestrian safety laws. Therefore, one aspect of this project was to expand the knowledge and training within the CPD, as discussed below.

4.2 Project Related Enforcement Activities

The *Pedestrian Crash Analysis* was used to identify uncontrolled crosswalks for enforcement missions. As a result, in 2012, there were 59 crosswalk enforcement missions conducted with CPD issuing 1,041 citations for "failure to stop for pedestrians in crosswalk" and 167 other citations. In 2013, there were 27 additional crosswalk enforcement missions conducted with NHTSA funding, resulting in 540 citations issued for crosswalk violations and 116 other citations.

The *Pedestrian Crash Analysis* also showed that a significant number of pedestrian crashes occurred at intersections. In 2012, CPD conducted its first high-visibility enforcements at five signalized intersections targeting drivers for red-light violations and for failing to yield the right-of-way when turning. Enforcement efforts at these signalized intersections resulted in 54 citations for "failure to stop for pedestrians in crosswalk," 8 red light citations, and 24 other citations. CPD initially found that intersection crosswalk enforcement was difficult to conduct for the following reasons:

- Pursuits – A police vehicle or vehicles had to be stationed to pursue offenders. More often the officer had to pursue other traffic violations not related to crosswalk enforcement. The crosswalk enforcement became a secondary activity. It was difficult to conduct a targeted pedestrian safety enforcement campaign.
- Vehicle Locations – In some locations, it was difficult to station a pursuit vehicle because of lack of space in the roadway and adjoining area.
- Lack of High-visibility – It was difficult to create a high-visibility scene. At uncontrolled locations, the team placed signs along the two approaches alerting the drivers to the enforcement effort. Drivers often saw the police presence before reaching the crosswalk. At signalized intersections with high volumes of traffic, it was not easy to place advance signage and police vehicles for high visibility.

Overall, it was felt that enforcement missions were best suited at unsignalized intersections and midblock crosswalks, since driver lack of compliance to stop for pedestrians was common. This allowed enforcement teams to remain busy and engaged with the intended activity rather than get side-tracked with enforcing other types of violations less related to pedestrian safety. Keeping the officers busy was considered an important morale aspect of enforcement missions to sustain interest.

Despite challenges and lower visibility of officers enforcing traffic, enforcement at signalized intersections was felt to help increase pedestrian safety at known crash locations and was continued, as shown on the following table.

Intersection Pedestrian Safety Enforcement Summary

Fiscal Year	Enforcement Missions	Citations Issued	Crosswalk Violations	Other Violations
2012	14	250	84	166
2013	11	177	46	131

In 2013, CDOT and CPD also focused about half of the NHTSA-funded enforcement missions in three targeted police districts, selected using both crash and crime data. CDOT and CPD identified three locations with high rates of traffic crashes *and* violent crimes, such as shootings and assault. CPD conducted 20 targeted enforcements (both uncontrolled crosswalks and intersections) at these locations to explore the correlation between traffic safety and crime identified in the Pedestrian Crash Analysis. Both day and nighttime traffic safety enforcement was conducted. CDOT also encouraged traffic enforcement officers to visit targeted areas and issue citations during normal shifts, outside of high-visibility enforcement missions. We do know that this was done as part of ongoing dialogue with traffic officers.

4.3 Enforcement Operating Procedures

The procedures for conducting high-visibility pedestrian safety enforcement are provided in Appendix F, CPD General Procedures for Pedestrian Safety Enforcement. The CPD Traffic Section has developed these enforcement procedures based on experience and need to conform to CPD operational protocols. The procedures were designed to provide guidance on enforcement at uncontrolled and signalized crosswalks with a varying degree of resources. The document is organized into "basic" and "high visibility" depending on the number of officers and equipment available.

These documented procedures serve two purposes. First, in the future, the CPD may expand pedestrian safety enforcement at the district level, in addition to Traffic Safety missions, as police training and communities' desire to encourage pedestrian safety increase. The general procedures provide a guide so that a district level team will be able to respond more efficiently to localize enforcement requests from community members and officials. Second, the procedures provide guidelines that could be used by other police departments. One objective of this project was to document lessons learned that could be applied to other government jurisdictions.

The procedures include an information flyer that highlights key points from the *Pedestrian Crash Analysis*, pedestrian safety laws and information on Chicago's efforts to raise awareness of pedestrian safety. The flyers were developed in both English and Spanish and distributed to drivers who were stopped during crosswalk enforcement missions. They also provides handouts for the general public at local Chicago Alternative Policing Strategy (CAPS) meetings.

4.4 Police Training

The pedestrian safety project included developing material that could be used to educate CPD officers on pedestrian crosswalk enforcement and laws. The CPD Education and Training Division provided valuable assistance to the project team since the training material had to be developed in formats that could be integrated into the CPD's training system. After the preliminary content was formulated, the Education and Training Division took a primary role in producing the final training products and integrating them into the CPD training system. Two product formats are consistently used to assist training efforts, a training bulletin and an e-learning program. Both are discussed below.

4.4.1 Police Training Bulletin

The Pedestrian Safety Bulletin, found in Appendix G, was prepared to inform law enforcement about the most important topics for an officer responding to a pedestrian crash or enforcing pedestrian safety laws. The Pedestrian Safety Training Bulletin was launched in December 2012 and addressed topics such as the definition of a crosswalk, most common pedestrian/motorist violations, appropriate

municipal and state codes, and additional resources. The bulletin cited significant State of Illinois and City of Chicago regulations pertaining to pedestrian safety. A compilation of the regulations is found in Appendix H.

The bulletins are available through the CPD training Web site, a secure site for police officers and can be printed. The safety bulletins, including the Pedestrian Safety Bulletin, can also be viewed electronically from inside squad cars. This allows officers to quickly identify appropriate municipal code numbers and definitions while conducting operations in the field.

All officers are required to view the bulletins. A notice is sent out to all officers that a new bulletin has been prepared and they are required to view it through the CPD training and information Web site. The CPD system maintains a record of the officers who have viewed the bulletins.

4.4.2 Pedestrian Safety e-Learning Program

As part of this project, a Pedestrian Safety e-Learning program was developed. The CPD is a slide show using a combination of text, pictures, audio narration and video segments to provide background data on pedestrian safety, examples of the most common causes for pedestrian crashes and the municipal and state codes most commonly used for issuing citations. Regardless of their actual participation in the enforcement operation, all CPD officers were required to take this training course. Each officer has an electronic account that includes a list of required training materials. When an officer completes a training course, the date is logged into the officer's CPD account. District supervisors receive monthly print-outs of account activity and are notified of any training material that has not been viewed by their assigned deadlines.

The pedestrian training course explains the minimum resources needed to conduct high-visibility enforcement to enhance the safety of pedestrians with a specific focus on motorist's behavior. It also suggests that officers can reduce pedestrian crashes by enforcing crosswalk violations as part of their routine patrol. The E-Learning program is designed to take 10 minutes to complete and includes a quiz at the end to reinforce the concepts covered. The key points of the E-Learning course are:

- Crosswalks are extensions or prolongations of the sidewalk.
- Crosswalks may be marked or unmarked.
- Crosswalks may be controlled or uncontrolled.
- Speed enforcement and high-visibility enforcement reduce the number of pedestrian crashes.
- Drivers must stop for pedestrians in crosswalks.

Since driver yielding behavior was identified as the safety issue and the enforcement target (pedestrians were not cited), the course includes the most common driver violations affecting pedestrian safety including vehicles:

- Failing to yield the right of way at uncontrolled crosswalks,
- Passing stopped vehicles at crosswalks, and
- Failing to yield the right-of-way when turning at a controlled crosswalk.

The most common driver violations developed and filmed by CPD are shown by video segments. The slideshow concludes with five questions to test the officers' knowledge of the content. A record of the response to the questions is not maintained; it is for the officer's information. Screen shots of the e-learning course are provided in Appendix I, Chicago Police Department Pedestrian Safety e-Learning Course Screen Shots.

CPD Conducting Enforcement Exercises
Source: TYLI

4.5 Findings

A high-visibility enforcement campaign can be more effective with notification of the local media. The media will often take interest in police activities, especially when the activities are first initiated. Media coverage provides an effective way to inform residents that the local police department is enforcing violations that compromise the safety of pedestrians.

The high-visibility enforcement campaign was better directed at uncontrolled marked crosswalks rather than intersections. These operations were more visible to the community and created a greater volume of activity that kept the officers busy and engaged in the enforcement efforts.

When developing procedures for a high-visibility enforcement campaign, it is important to build in flexibility. The enforcement team often has to adapt to the scene and needs flexibility in order to adjust to the situation and site characteristics.

In lieu of expanding the enforcement campaign, it was felt that providing all officers with knowledge about the pedestrian safety campaign and the associated laws was a better means to encourage more enforcement related to pedestrian safety.

The police training material must conform to the procedures and training resources of the police department. In the end the training material was developed by the police department with assistance from the project team. The police department took ownership of the final products and could more easily integrate the material into the overall training system.

5. Before-and-After Study: Driver Yielding Behavior

5.1 Background

As part of the CDOT Pedestrian Safety Initiative, a before-and-after study was conducted to observe driver yielding behavior to pedestrians in the crosswalk at signalized and unsignalized intersection locations. Data was collected for the before (baseline) condition between May 6 and June 17, 2011. Data was collected for the treatment (after) condition between August 10 and October 23, 2012. The before-and-after study was done to determine the crosswalk enforcement and marketing campaign's effectiveness to increase driver and pedestrian awareness and improve safety.

5.2 Methodology

Data collectors recorded naturally occurring pedestrian crossings as well as pedestrian crossings staged by trained decoys. Specific protocol was used to collect driver yielding behavior for more than 7,000 pedestrian crossing events at signalized and unsignalized intersections during the time periods stated above.

Data were recorded for driver yielding behavior and action prior to pedestrian crossing event involving a driver turning right on green, left on green, or right on red. Data was also recorded about the crossing event (e.g., distance motorist yielded from the crosswalk, evasive actions taken either by the driver or pedestrian, and whether pedestrians were trapped in the center of the roadway while attempting to cross).

Data was summarized in charts showing driver yielding behavior rates before and after the crosswalk enforcement campaign while also showing differences between naturally occurring crossings and staged crossings.

5.3 Findings

The before-and-after study found that drivers, on average, yielded to pedestrians in crosswalks more often after the crosswalk enforcement campaign than before. Driver yielding to pedestrians was shown to increase at signalized and unsignalized intersections and there were fewer observed conflicts between drivers and pedestrians. Additionally, drivers and pedestrians were observed taking fewer evasive actions to avoid potential crashes after the crosswalk enforcement campaign than before.

Specific findings at eight locations included:

- Driver yielding to pedestrians at signalized intersections:
  - Increased at 6 of the locations,
  - Decreased at 2 of the locations,
  - Increased 4 percent during right on green,
  - Increased 14 percent during left on green, and
  - Increased 26 percent during right on red after the campaign compared to before at 8 studied intersections.

  The 2 intersections having decreases in yielding activity may have been influenced by:
  - An increase in pedestrian activity that meant drivers had less green time to turn without a pedestrian present, and
  - An increase in pedestrian crossing events disproportionately brings down the overall mean yielding across signalized intersections. (See Appendix J, Figure 1 and Table 1.)

- Driver yielding to pedestrian "staged" crossings (trained decoy) at unsignalized intersection:
  - Increased 6 percent after the campaign compared to before;
  - Increased less than 1 percent for natural crossings at the 8 studied intersections; and
  - Half of the locations showed notable improved yielding to decoys, and 2 of 8 showed notable yielding to natural crossings. Other locations showed little change or a decrease in yielding.

  Further study would be needed to understand if demographic factors, seasonal changes, or other variables contributed to these results. (See Appendix J, Table 2.)
- Driver yielding distance increased after treatment compared to before. (See Appendix J, Figure 2.)

A major finding was that naturally occurring pedestrian crossings, as opposed to those with trained decoys, on average, saw more conflicts, more evasive actions, and lower yielding rates both before and after the crosswalk enforcement campaign.

This finding suggests that trained decoys behave more conservatively than natural pedestrians, and that pedestrian crossing behavior might also influence driver yielding behavior. The link between these actions was not the focus of the study; however, this could be a topic of additional research.

The study involved the collection of data before and after the crosswalk enforcement campaign. Future education and enforcement efforts should be based on updated or new crash data analysis. Continuing efforts with data collection and analysis would provide useful measures of the city's ongoing efforts at pedestrian safety awareness. As it involved influencing a cultural change regarding driver and pedestrian behavior, the study suggested that regular, repeated enforcement activities coupled with an ongoing awareness campaign are recommended. The full before-and-after study is provided in Appendix J – Report on Yielding Behavior at Crosswalks in Chicago.

6. Stakeholder Engagement

During the course of the project, TYLI gave several PowerPoint presentations to stakeholder groups to explain the status, obtain feedback, and gage support for the overall project. The presentations are summarized below:

- February 9, 2011, to the Mayor's Pedestrian Advisory Committee – This presentation provided a summary of the crash analysis.
- April 20, 2011, to the Chicago Metropolitan Agency for Planning, Bicycle and Pedestrian Task Force – This presentation was a shorter version of the crash analysis summary presented on February 9, 2011.
- May 4, 2011, to the Mayor's Pedestrian Advisory Committee – This presentation provided a summary of the initial marketing campaign titled "See You, See Me," which was subsequent superseded by a more hard-hitting and serious campaign.
- September 12, 2012, to the ProWalk/ProBike Conference – This presentation was an overview of the project.
- November 7, 2012, to the Mayor's Pedestrian Advisory Committee – Similar to the presentation given on September 12, 2012.

The April 20, 2011, and September 12, 2012, presentations are included in Appendix K, Stakeholder Involvement Presentations. The May 4, 2011, presentation is included in Appendix E, Unused Marketing Material.

The public was engaged through media outlets. The media attention with the resultant comments on blogs and social media sites showed much support of the city's efforts. This is discussed in more detail in the Section 3.5, Media Coverage.

7. Transferability Model

At the onset of this award, NHTSA provided a sample transferability model to be used as part of Chicago's final report (see Appendix K). This model consisted of a series of questions for Chicago to provide responses. In doing so, Chicago is sharing its lessons learned from their pedestrian safety campaign to assist others in similar pedestrian safety education and enforcement efforts. The questions cover topics ranging from developing a team of stakeholders to identifying successful components of a campaign to clarify the message and improve the effectiveness of a campaign.

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Chicago Department of Transportation
Pedestrian Safety Awareness Campaign

Appendices Overview

Appendices A through L are included in this report as example working documents, data collection or analysis tools, or internal reports that were generated as part of the development or deployment of the Chicago program. The intent for including them is to provide others with real-world examples for how the demonstration communities or the contractor handled a particular issue in the development of the project (e.g., how a community performed or structured a crash report, conducted a site visit, developed an action plan, collected field data, etc.) rather than provide a polished final deliverable. Appendix K is included as a summary of lessons learned from the project that can be transferred to other communities.

CDOT
CHICAGO DEPARTMENT
OF TRANSPORTATION

Appendix A
2011 Pedestrian Crash Analysis, Summary Report

The City of Chicago 2011 Pedestrian Crash Analysis reports were prepared in 2011 using crash data from the years 2005-2009. The findings of these reports informed the next steps of the project which involved developing a campaign that would reach the target populations, locations, and behaviors identified in the crash analysis. The technical report contains the full analysis while the summary report compiles key findings and data.

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CITY OF CHICAGO
2011 PEDESTRIAN CRASH ANALYSIS

SUMMARY REPORT

Chicago Department of Transportation

CDOT

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Pedestrian Safety In Chicago

Pedestrian activity is an essential part of Chicago's vibrancy. It livens our streets and neighborhoods, strengthens local businesses, creates safer neighborhoods, provides access to jobs, and leads to healthier Chicagoans. Given these benefits, it is important that we ensure our streets are comfortable and safe for all users. A critical component of this is pedestrian safety. The City, residents, visitors, businesses, and community groups must ensure everyone can travel safely. This shared responsibility relates to how we drive, travel as pedestrians, design our streets, and enforce our traffic laws.

The City of Chicago, Chicago Department of Transportation (CDOT), and Chicago Police Department (CPD) have a number of ongoing efforts aimed at improving pedestrian safety. These efforts include outreach and policy efforts, enforcement initiatives, and engineering and design improvements.

To further inform pedestrian safety efforts, CDOT has completed an extensive pedestrian crash analysis. This analysis included all collisions in Chicago from 2005 through 2009 that involved a pedestrian and a motor vehicle in which the pedestrian was the first point of contact for the vehicle[1]. Specific crash factors and characteristics were analyzed to determine populations who were involved in pedestrian crashes, when and where pedestrian crashes occurred, and the contributing factors related to pedestrian crashes.

The pedestrian crash analysis is the first step in the Pedestrian Plan

This analysis will be utilized to guide the development of Chicago's upcoming Pedestrian Plan and public awareness campaign. The findings within this report will help inform the Plan's goals and objectives and will provide fundamental information needed to make sound, data-driven policies and programming decisions.

1 Note: 2005 data were originally geocoded in a different coordinate system. Some anomalies in the data may exist as a result.

ONGOING PEDESTRIAN PROGRAMS

The following are ongoing programs aimed at providing better accommodation for pedestrians and improving safety.

Mayor's Pedestrian Advisory Council: Established in 2006, the Mayor's Pedestrian Advisory Council acts as the interdisciplinary body of stakeholder groups and local, state, and federal representatives on pedestrian safety. The Council meets quarterly.

Safe Streets for Chicago: Launched in 2006, this pedestrian safety campaign includes coordination with the Office of Emergency Management and Coordination and the Chicago Police Department to implement public safety messaging and enforcement efforts.

Safe Routes Ambassadors*:* This pedestrian safety education program annually reaches over 13,000 Chicago students, parents, and teachers through direct in-school safety presentations.

Safe Routes for Seniors: This senior walking encouragement and safety program focuses on the unique perspective of senior pedestrians and conducts presentations at senior centers, senior residences, and health fairs.

Pedestrian Safety Enforcement: Ongoing enforcement of pedestrian safety laws in targeted high crash corridors. Evaluations of the enforcements show that more drivers are stopping and yielding for pedestrians.

Countdown Timers: Proven to reduce pedestrian crashes at an intersection, by the end of the summer of 2011 Chicago will have installed countdown timers at over 44 percent of signalized intersections. CDOT is pursuing funding for installations at 100 percent of intersections.

Signal Timing: Leading Pedestrian Intervals and increased pedestrian crossing time facilitate more comfortable crossings. CDOT is retiming crossings at key intersections with attention to the needs of vulnerable populations such as children or seniors.

Refuge Islands/Curb Extensions: Refuge islands and curb extensions reduce the crossing distance for pedestrians. CDOT is utilizing these proven countermeasures to improve pedestrian safety throughout the city.

Traffic Calming Program: Designed to make residential streets safer for drivers, pedestrians and bicyclists. The program uses several roadway engineering tools to "calm" vehicular traffic and encourage slower and safer driving behaviors.

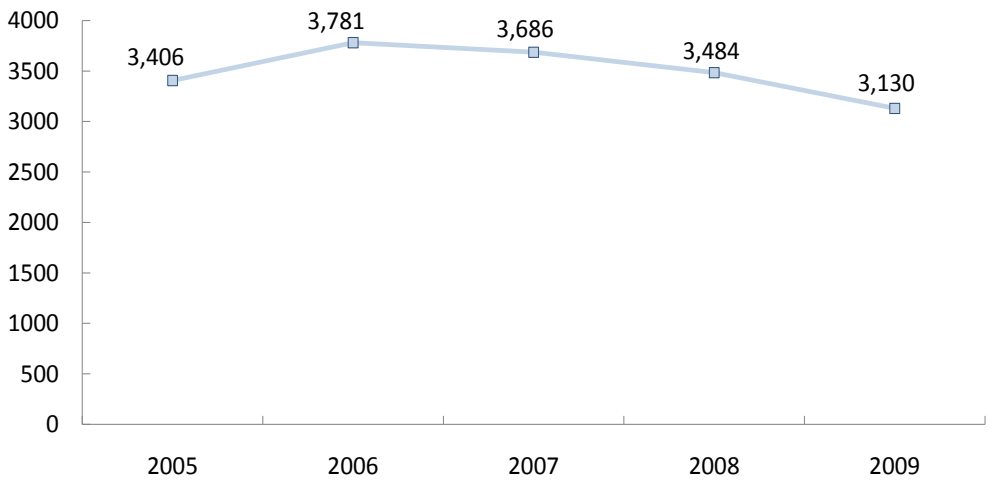
Pedestrian Crash Trends

Pedestrian cr have droppe percent since

The number of pedestrian crashes in Chicago decreased significantly from 2005 to 2009 (**Figure 1**), continuing a dramatic downward trend seen throughout most of the past decade. In fact, the 3,130 pedestrian crashes in 2009 represented a nine-year low, dropping 8 percent since 2005 and more than 22 percent since 2001.

The pedestrian crash rates per 100,000 Chicagoans experienced a similar downward trend as seen in the total number of crashes. The crash rate decreased by more than 9 percent from 2005 to 2009 and by more than 21 percent from 2001.

Figure 1:
Total Pedestrian Crashes



City of Chicago

The annual number and rate of pedestrian fatalities from 2001 to 2009 also saw downward trends. The 34 fatalities in 2009 was the lowest fatality count of the study period (**Figure 2**). In fact, it represented a 16-year low from the first year the data is available in 1994. Pedestrian fatalities have decreased by 61 percent from the 1994 level of 88. The rate of pedestrian fatalities per 100,000 residents decreased over the study period from a high of 2.5 in 2005 to a low of 1.2 in 2009.

Pedestrian fatalities reached a 16-year low in 2009 with 34 fatalities

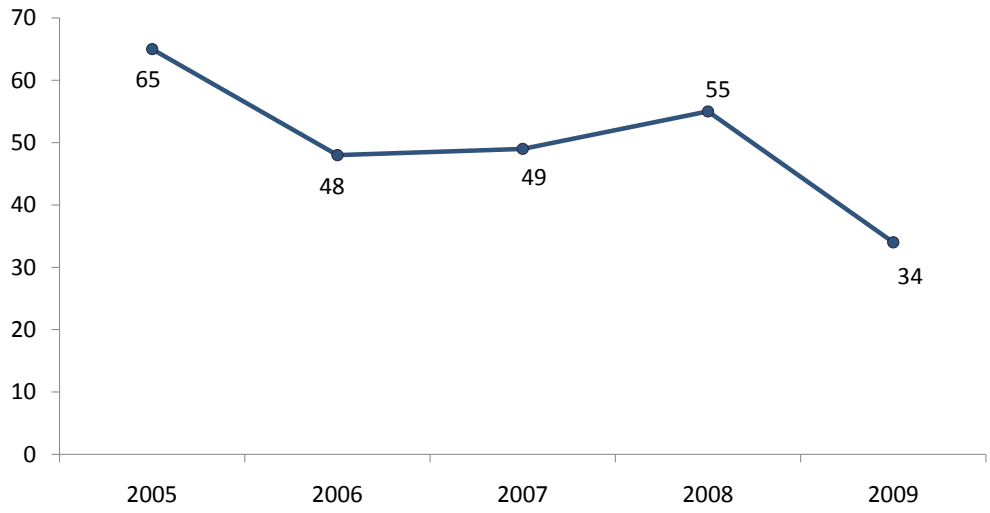


Figure 2:
Pedestrian Fatalities

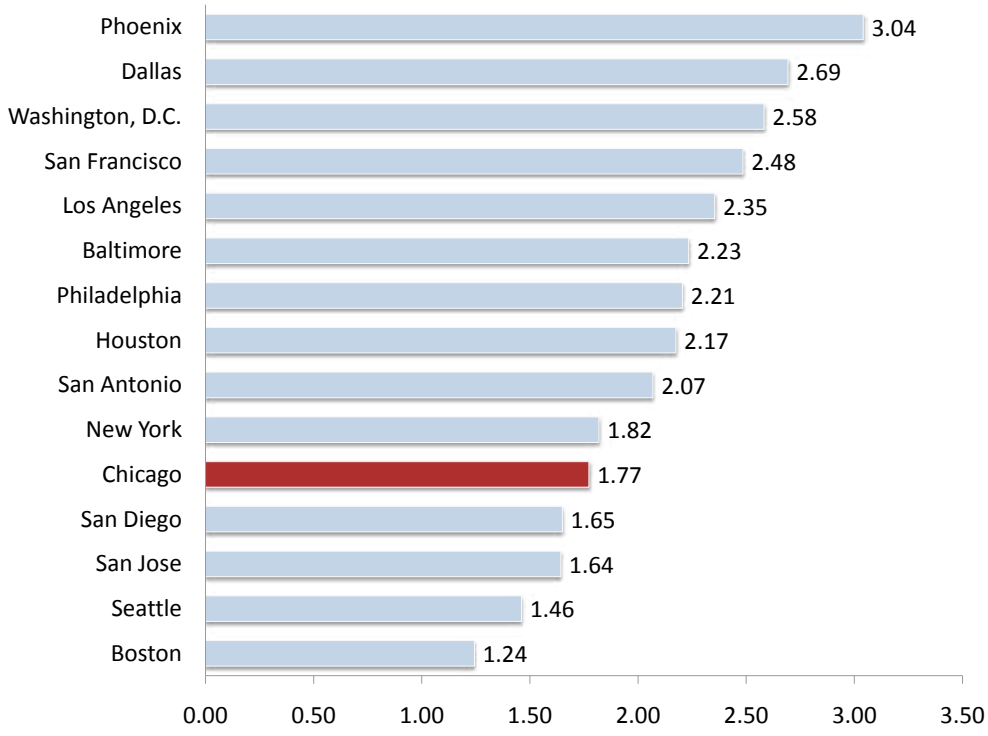
Serious injury crashes also decreased in Chicago. These crashes decreased from a high of 630 in 2005 to 503 in 2009, representing a 20 percent drop. The lowest number of serious injury crashes occurred in 2008 with 458.

Chicago has the lowest pedestrian fatality rate of large, densely populated cities

Not only have fatal pedestrian crashes decreased throughout Chicago, but pedestrians are safer here than in most peer cities. **Figure 3** shows Chicago's pedestrian crash fatality rate per 100,000 residents as well as that of ten comparable US cities. Chicago has the fifth lowest pedestrian fatality rate, behind only Boston, Seattle, San Jose and San Diego.

The average pedestrian fatality rate in Chicago of 1.77 from 2005 through 2009 was 16 percent lower than the average rate of the 14 other cities. Most notably, when considering population density, Chicago had the lowest pedestrian fatality rate of cities over 500,000 residents with a population density greater than 5,000 residents per square mile.

Figure 3:
Pedestrian Fatality Rates of Chicago and Peer U.S. Cities
(2005-2009)



Key Findings

Trends in pedestrian crashes from 2005 through 2009

- Pedestrian crashes in Chicago have followed a downward trend since 2001
- Chicago has a low pedestrian fatality rate among peer cities

Who was involved in pedestrian crashes?

- The age group of 15 to 18-year-old pedestrians had the highest crash rate per population
- More males than females were involved in crashes as pedestrians and motorists; however, more females were involved in crashes in Chicago as compared to national statistics
- Taxi involvement in pedestrian crashes in the Central Business District (CBD) was 28 percent
- Taxi involvement in crashes outside the CBD was 2 percent

When did the pedestrian crashes occur?

- From 2005 through 2009, Thursdays had the most crashes
- 3:00 - 6:00 p.m. was the high crash time period, 6:00 - 9:00 p.m. was the second highest crash time period

What were the roadway characteristics of pedestrian crashes?

- Fifty percent of fatal and serious injury crashes occurred on arterial streets, despite accounting for approximately 10 percent of the street miles in Chicago, based on IDOT's roadway classification system
- Eight out of the top twelve neighborhood high crash corridors were four-lane roadways; all were arterials
- Seventy-eight percent of all crashes and 80 percent of fatal and serious crashes occurred within 125 feet of the midpoint of an intersection; 53 percent of all crashes were recorded as intersection-related on crash reports
- Youth crashes (ages 0 to 14) were more likely to occur on local streets than other age groups (43 percent vs. 23 percent overall)
- Overall, the majority (76 percent) of the crashes occurred on arterial and collector roadways
- Youth pedestrians aged 0 to 14 were more likely to be struck mid-block and not in a crosswalk than other age groups
- Older pedestrians were more likely to be struck in a crosswalk than other age groups

Key Findings (cont'd.)

Where in Chicago were the pedestrian crashes occurring?

- A band of community areas stretching from the Loop and Near North Side on the east to Austin on the west contained the highest number of overall and/or fatal and serious injury pedestrian crashes
- The Chicago Transit Authority rail stations with high numbers of nearby pedestrian crashes were along the Green Line, Red Line - Dan Ryan branch, and Blue Line - O'Hare branch
- A two-mile corridor along 79th Street contained four of the top twenty crash intersections
- The Loop, Near North Side, and Near West Side Chicago Community Areas contained four of the top crash intersections
- In an examination of various factors including crime, income, race, language spoken, and walkability index, the strongest correlation found was between pedestrian crashes and crime

What factors were most common in pedestrian crashes?

- Hit and run crashes accounted for 40 percent of fatal crashes in Chicago versus 20 percent nationally; hit and run crashes accounted for 33 percent of overall pedestrian crashes in Chicago
- On average, there were 2 hit and run crashes per day resulting in a pedestrian injury or fatality
- The most common pedestrian action at the time of a crash was "crossing with the signal"; pedestrians crossing with the signal was more common in the CBD than outside
- Citywide, 52 percent of pedestrian crashes at signalized intersections involved turning vehicles; 36 percent were left turns and 16 percent were right turns
- 66 percent of the crashes in the CBD involved turning vehicles; 48 percent were left turns and 17 percent were right turns
- 48 percent of the crashes outside the CBD involved turning vehicles; 32 percent were left turns and 16 percent were right turns

City of Chicago

Who Was Involved in Pedestrian Crashes

PEDESTRIAN AGE

Children in Chicago were more likely to be involved in pedestrian crashes than adults. The crash rate for children of high school age (15 to 18) was highest among all age groups at 194.6 crashes per 100,000 population. Primary school-aged children (5 to 14-year olds) had the second highest crash rate at 137.5. The fatal (K) and serious injury (A) crash rate also was highest among 15 to 18-year olds. (**Figure 4**).

Children 5 to 18 years old were most likely to be involved in pedestrian crashes

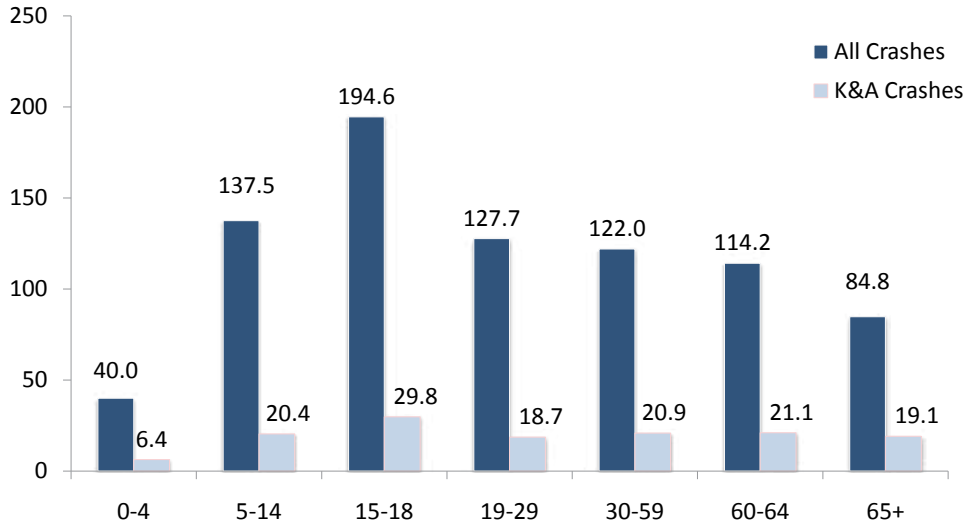


Figure 4:

Pedestrian Crash Rate per 100,000 Population by Age Group

(2005-2009)

Crashes among children decreased, however. From 2005 through 2009, the annual number of pedestrian crashes involving 5 to 18-year olds decreased by 28 percent, from 964 to 698.

Although the pedestrian crash rate of 84.8 per 100,000 for seniors (65+) was second lowest among all age groups, seniors were overrepresented in fatal and serious injury crashes. Despite the fact that seniors were involved in only 6.2 percent of pedestrian crashes overall, they were involved in 9.5 percent of the fatal crashes. Four percent of senior crashes resulted in a fatality and 18.2 percent resulted in serious injury, compared with 1.4 percent and 14.9

percent respectively, for all age groups. The higher proportion of fatal and serious injury crashes among seniors is likely related to their higher physical fragility relative to the overall population.

Despite a lower crash rate than other age groups, seniors (65+) were over-represented in fatal and serious injury crashes

PEDESTRIAN GENDER

Male pedestrians in Chicago were involved in 52 percent of all pedestrian crashes and 54 percent of fatal and serious injury crashes, despite making up only 48 percent of Chicago's population. These proportions are lower than national statistics, however as nationally, males are involved in 69 percent of pedestrian crashes. The largest proportion of males involved in pedestrian crashes occurred in the 0 to 14 age group, where they were involved in 62 percent of all crashes and 1.6 times more likely to be involved in a crash than females.

Female pedestrians in Chicago were involved in 45 percent of all crashes between 2005 and 2009, 1.5 times more than the national average of 31 percent. There were three age groups where females were involved in more crashes than males: 15 to 18, 19 to 29 and 65+. The only age groups where the female crash rate by population

was higher than the male rate, however, were the 15 to 18 and 19 to 29 age groups (**Figure 5**).

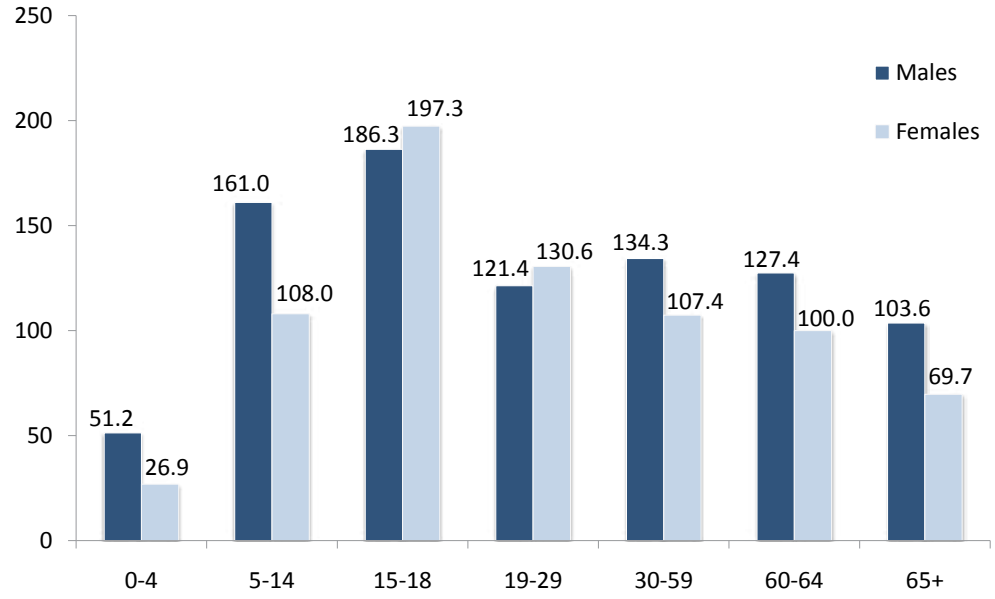


Figure 5:
Pedestrian Crash Rate per 100,000 Population by Gender and Age Group (2005-2009)

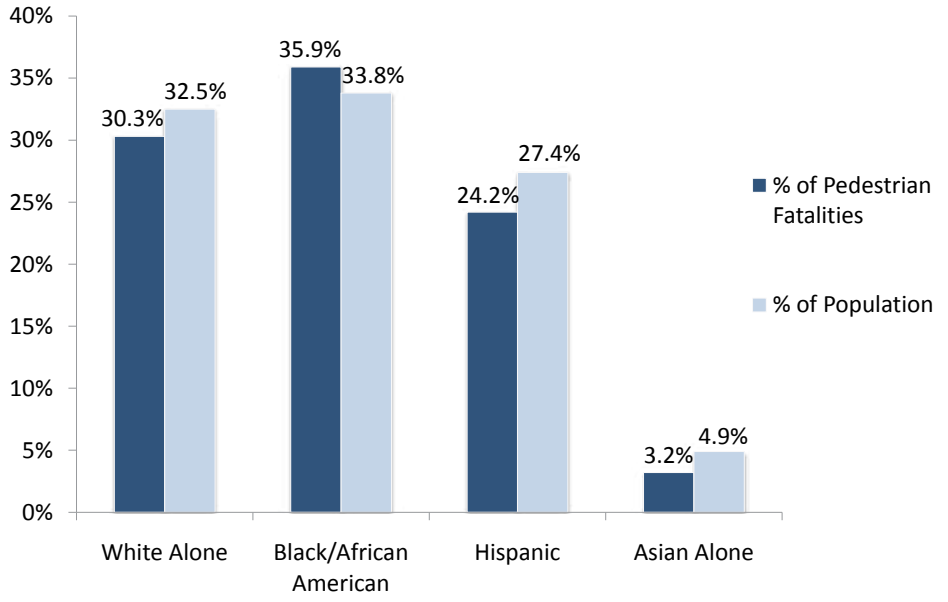
PEDESTRIAN RACE AND ETHNICITY

Information on the race of the pedestrians involved in crashes was only available for fatal pedestrian crashes, for all years except 2008. The breakdown of pedestrian fatalities closely matched the proportion of Chicago's popu-

lation per the 2005-2009 US Census American Community Survey (**Figure 6**). Pedestrians who identified as black or African American were the only group overrepresented in crashes as they were involved in 36 percent of fatal crashes while making up 34 percent of the overall population.

Figure 6:

Pedestrian Fatalities by Race



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When Did Pedestrian Crashes Occur

DAY OF WEEK

Pedestrian crashes occurred most often on Thursdays and least often on Fridays and Saturdays (**Figure 7**). Nearly 17 percent of all crashes occurred on Thursdays. These results were similar for fatal and serious injury crashes. This is a significant shift from the 2001 through 2005 period, when Fridays had the most pedestrian crashes. The low percentage of fatal and serious injury crashes on Fridays and Saturdays in Chicago, 13 percent and 10 percent respectively, differs significantly from national statistics as well, where Fridays account for 17 percent and Saturdays 18 percent of pedestrian fatalities.

Thursdays had the most pedestrian crashes while Saturdays had the fewest

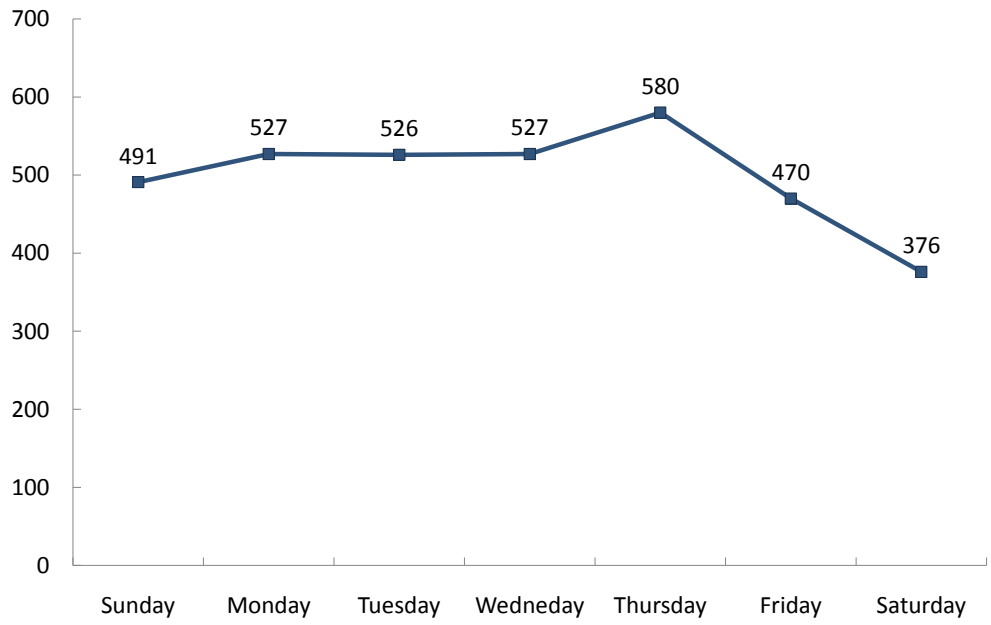


Figure 7: Average Pedestrian Crashes by Day

TIME OF DAY

Pedestrian crashes occurred most often from 3:00 p.m. to 6:00 p.m. for all age groups except seniors. This was especially evident in the 5 to 14 age group, where almost 40 percent of the pedestrian crashes occurred during this period, compared to 26 percent of pedestrian crashes for all age groups combined.

Seniors were most likely to be struck mid-day. Over 48 percent of senior

Pedestrian crashes occurred most often during the evening peak period, 3:00 p.m. - 6:00 p.m.

crashes occurred between 9:00 a.m. and 3:00 p.m., compared to roughly 29 percent of pedestrian crashes for all age groups occurring during this period.

Late night crashes were more likely to involve 19 to 29-year olds and to occur on weekends. Ten percent of crashes among this age group occurred between midnight and 3:00 a.m., double the percentage of crashes for all age groups combined during this period. Over 21 percent of all pedestrian crashes on weekends occurred between the overnight hours of 9:00 p.m. and 6:00 a.m., compared to 16 percent of weekday crashes occurring during the same period.

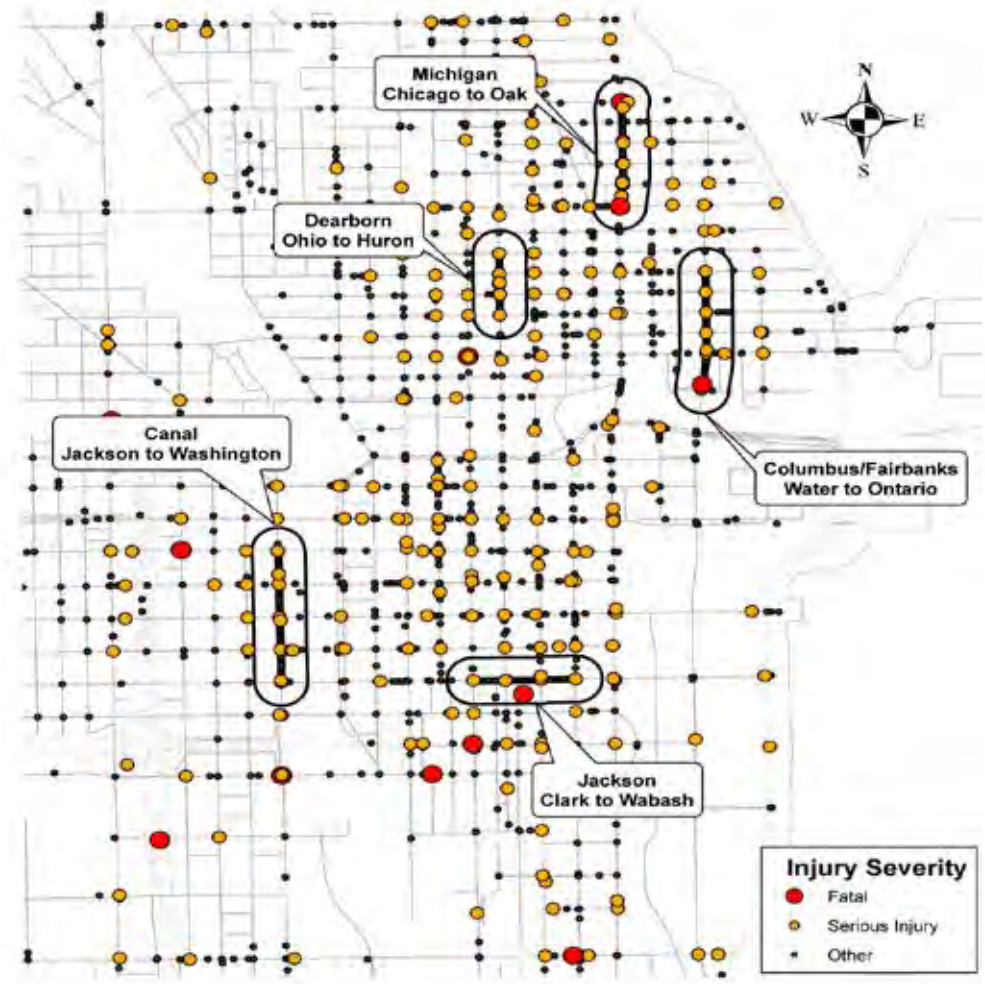
City of Chicago

Where Did Pedestrian Crashes Occur

CENTRAL BUSINESS DISTRICT (CBD)

Various analyses were performed on pedestrian crashes that occurred in the Central Business District (CBD)[2]. The Near North Side and Loop Chicago community areas (CCA) comprise most of the CBD and, over the five-year study period, experienced the highest number of pedestrian crashes of all 77 CCAs. The CBD is vastly different from the rest of Chicago due to the large concentration of commuters, tourists, business travelers and residents. The CBD also has shorter block lengths than most other areas of Chicago and the majority of intersections are signalized.

Five high crash corridors were identified within the CBD (**Map 1**). These five corridors accounted for 19.5 percent of all fatal and serious injury crashes in the CBD during the five-year period.



Map 1:

CBD High Crash Corridors and Pedestrian Crashes

2 An area bounded by Roosevelt Road to the south, Halsted Street to the west, Division Street to the north and Lake Michigan to the east

Pedestrians in the CBD were more likely to be struck while crossing in a crosswalk and with the "Walk" signal than pedestrians outside the CBD. The locations of pedestrians at the time of a crash were recorded as being in a crosswalk, in the roadway, outside an available crosswalk, where a crosswalk was unavailable, in a driveway, or in undetermined locations.

Fifty-six percent of pedestrians struck in the CBD high crash corridors were in the crosswalk, compared to only 32 percent citywide. Outside the CBD, the most common type of pedestrian crash occurred when the pedestrian was in the roadway.

Taxis were involved in 28 percent of the pedestrian crashes in Chicago's CBD

Taxis were involved in over 33 percent of the crashes occurring in the CBD high crash corridors, compared to only 5.1 percent of all crashes citywide. Overall in the CBD, taxis were involved in 28 percent of the pedestrian crashes. The number of taxis within the CBD relative to the number of overall vehicles is unknown, so it is difficult to determine if taxis are overrepresented among CBD crashes.

CHICAGO NEIGHBORHOODS

Chicago Community Areas (CCA) were used to examine pedestrian crashes at the neighborhood level. The CCAs divide the city into 77 areas that have remained constant since 1980 and are tied to commonly referenced neighborhoods.[3]

3 *Encyclopedia of Chicago* http://encyclopedia.chicagohistory.org/pages/319.html. Accessed April 25, 2011.

Table 1 lists the CCAs with the highest number of total fatal (K) and serious injury (A) pedestrian crashes. These eight CCAs were also among the twelve CCAs with the most pedestrian crashes overall. The table also lists the number of total crashes. These CCAs, except for Auburn Gresham, which is on the southwest side, form an east-west band across Chicago, stretching from the Loop and Near North Side on the east to Austin on the west (See **Map 2**).

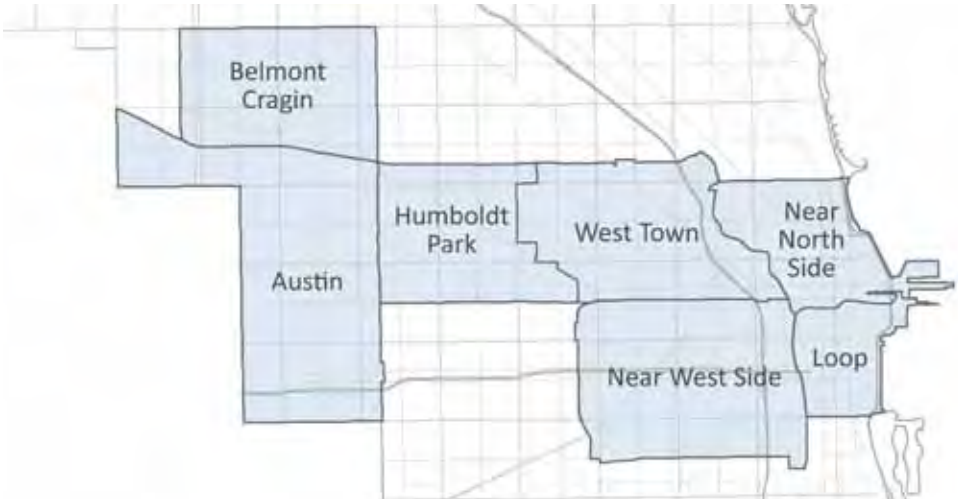
A band of Chicago Community Areas across central Chicago includes seven of the eight areas with the most pedestrian crashes

CCA	K&A Crashes	Total Crashes
Near North Side	139	1,071
Austin	130	903
Loop	118	924
Near West Side	93	633
Belmont Cragin	83	421
West Town	81	497
Auburn Gresham	73	407
Humboldt Park	71	398

Table 1:

Top CCAs by Total and K&A Pedestrian Crashes

These CCAs also had a high number of hit and run crashes and high rates of crashes when accounting for factors such as population and street mile.



Map 2:

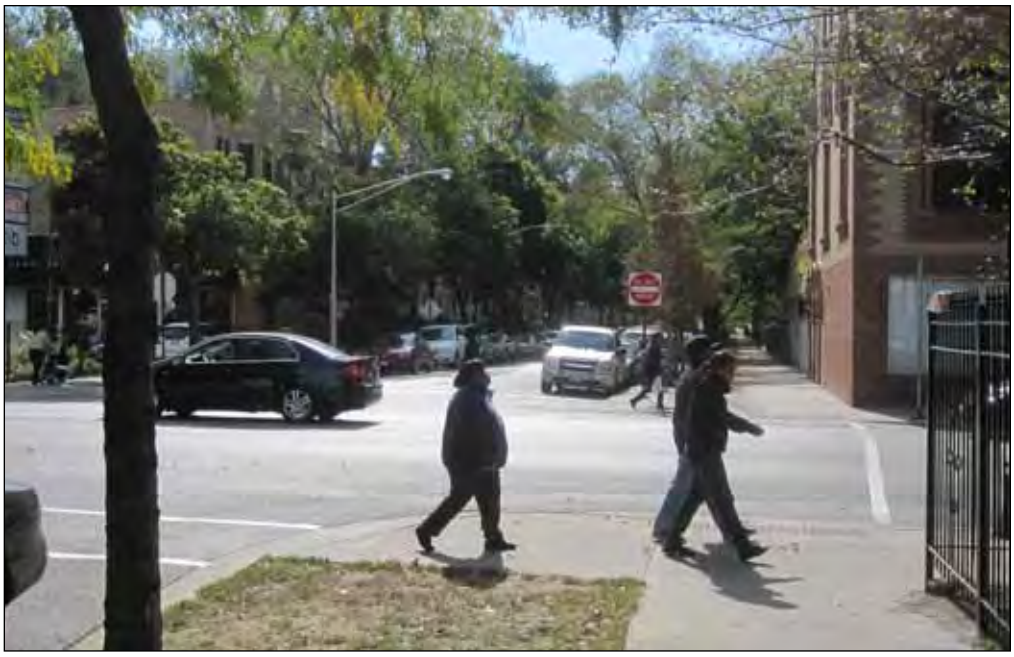
Seven of Eight High Crash CCAs

Twelve high crash corridors were identified within Chicago's neighborhoods outside of the CBD. The 12 neighborhood high crash corridors were assigned a crash index and ranked using a weighted crash density (**Table 2** and **Map 3**). The crash index included a higher weighting for fatal and serious injury crashes. These corridors accounted for 6.7 percent of all fatal and serious injury crashes during the five-year period.

Table 2:

Neighborhood High Crash Corridors by Crash Index

Street	From	To	Crash Index
79th	King	Stony Island	13.06
Cicero	Harrison	Chicago	11.85
63rd	California	Ashland	9.87
Western	71st	63rd	9.36
95th	Eggleston	King	9.30
Fullerton	Central	Cicero	7.95
79th	Ashland	Halsted	7.92
Madison	Central	Pulaski	7.65
North	Kostner	Kedzie	7.44
Chicago	Keeler	Kedzie	7.17
Devon	Sacramento	Leavitt	6.82
Broadway	Montrose	Balmoral	6.79



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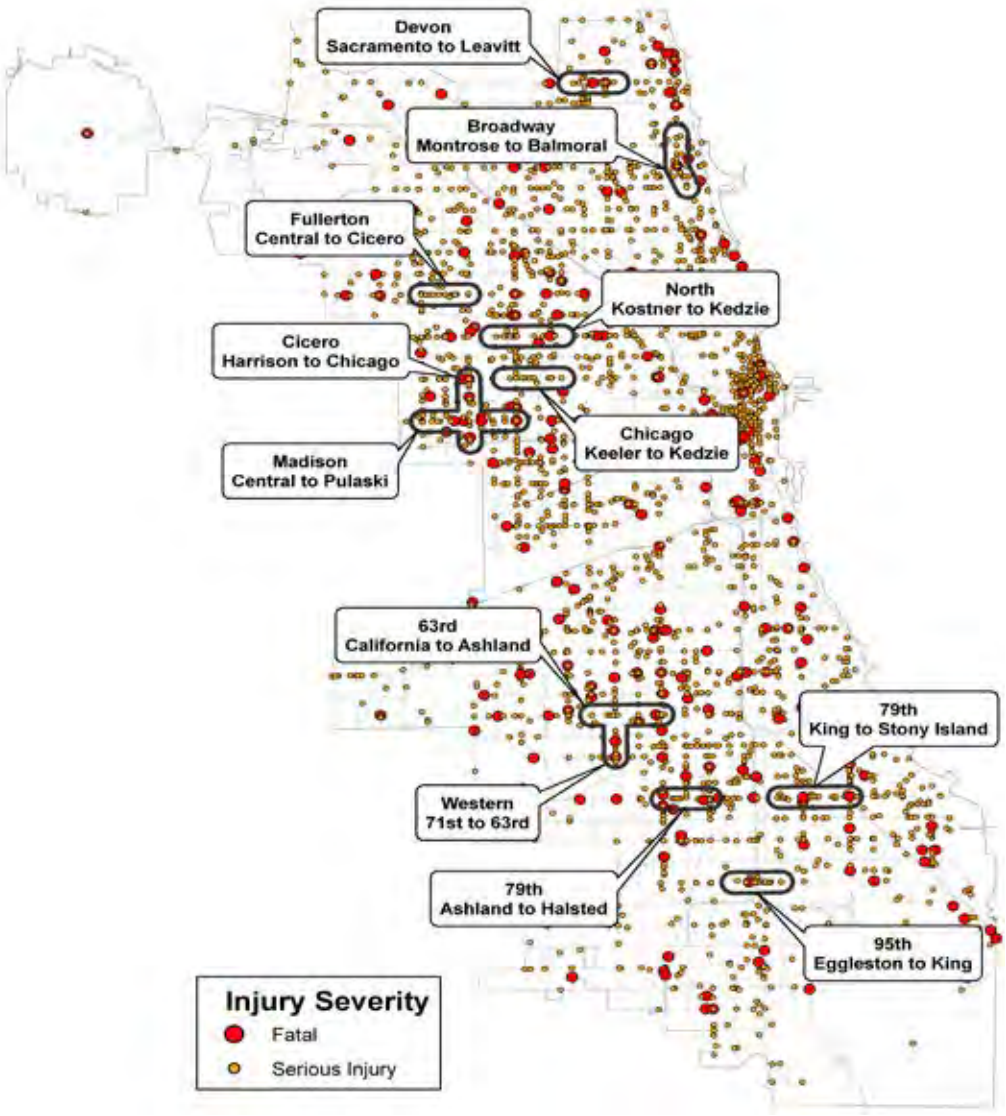


Map 3:

Neighborhood High Crash Corridors

Fifty-three percent of pedestrian crashes within the high crash corridors occurred on four-lane roadways compared to only 26 percent of crashes citywide. All twelve of the corridors were arterials, with four being principal arterials and eight being minor arterials, according to the Illinois Department of Transportation's roadway classification system.

The twelve corridors with the highest density of crashes were all arterial streets

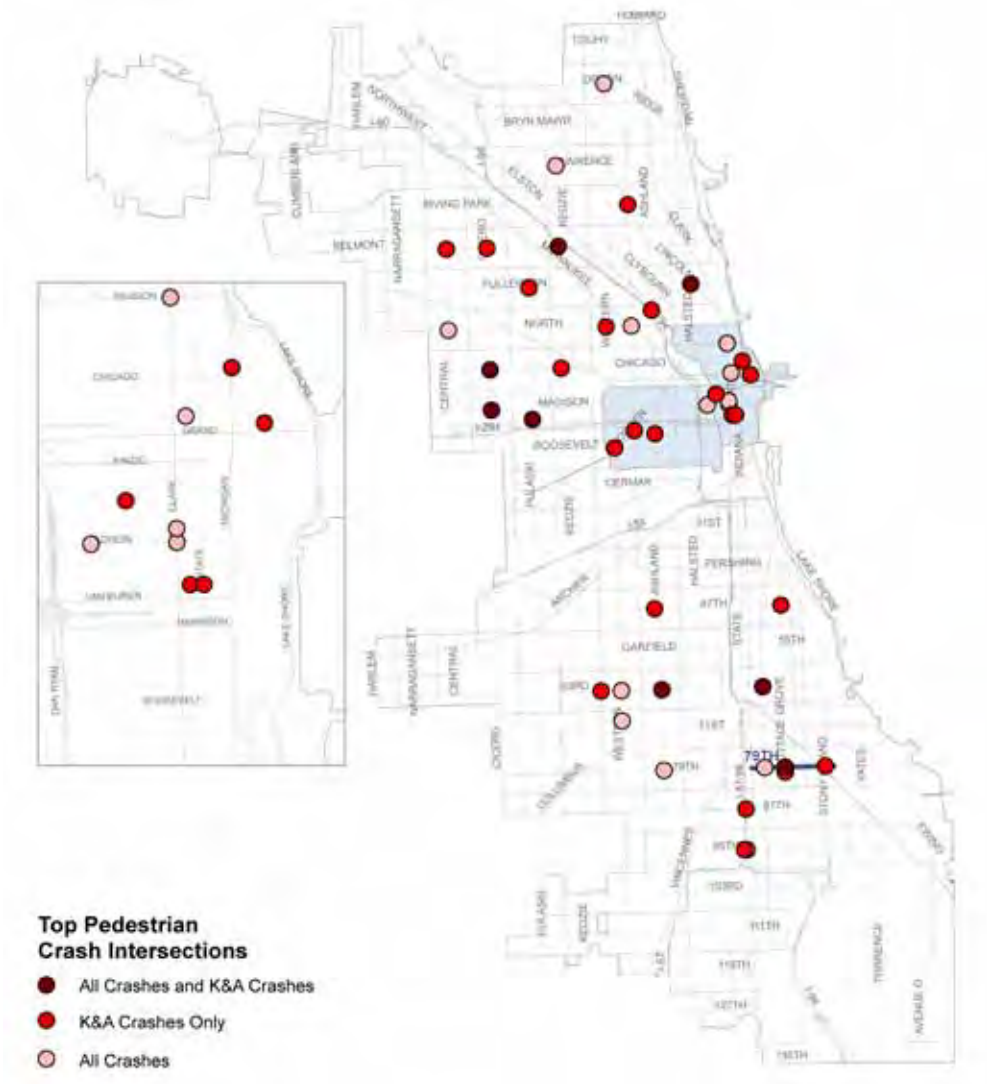
INTERSECTIONS

Intersection crashes were defined as those occurring within 125 feet of the intersection midpoint. Based on this definition, 78 percent of all pedestrian crashes and 80 percent of fatal and serious injury pedestrian crashes from 2005 through 2009 occurred at an intersection. This is significantly different from national statistics, where 46 percent of crashes are intersection related. Chicago's dense street-grid and short block lengths may account for such a high proportion of intersection crashes.

The intersections with the highest overall pedestrian crashes and the highest fatal and serious injury pedestrian crashes were identified (**Map 4**). Generally speaking, these intersections were scattered throughout the city. Of note, though, four of the top crash intersections were along a two-mile corridor of 79th Street and four were in each of the Loop, Near North Side, and Near West Side CCAs.

Map 4:

Top Pedestrian Crash Intersections



Pedestrians were most often crossing with a signal when struck. Citywide, 49 percent of pedestrians struck at signalized intersections were crossing with a “Walk” signal. This number was slightly higher in the CBD where 60 percent of pedestrians were crossing with the signal and slightly lower outside of the CBD where 47 percent of pedestrians were crossing with the signal.

Pedestrians crossing against the signal accounted for 16.4 percent of crashes. A total of 19 pedestrian actions were recorded at the time of a crash. Pedestrians recorded as taking “unknown” or “other” actions accounted for almost 18 percent of the crashes. In the remaining crashes, the pedestrian actions were spread out across 15 other crash reporting options, including “walking with traffic,” “walking against traffic,” or “standing/playing/working in roadway.”

Seventy-eight percent of all pedestrian crashes and eighty percent of fatal and serious injury crashes occurred within 125 feet of an intersection

CTA STATIONS

Fatal and serious injury pedestrian crashes within 1/8 mile of CTA transit stations were analyzed to identify stations with high crash incidences. While 8 of the top 10 high crash stations were in the CBD, these stations were not included in this summary because of the high volumes of pedestrians around these stations who are not using transit.

The top 10 stations, excluding CBD stations, are displayed in **Table 3**. Three of the top 10 high crash stations were located along the Green Line on the south side, 3 were along the Dan Ryan branch of the Red line, and 2 along the Blue Line O'Hare branch.

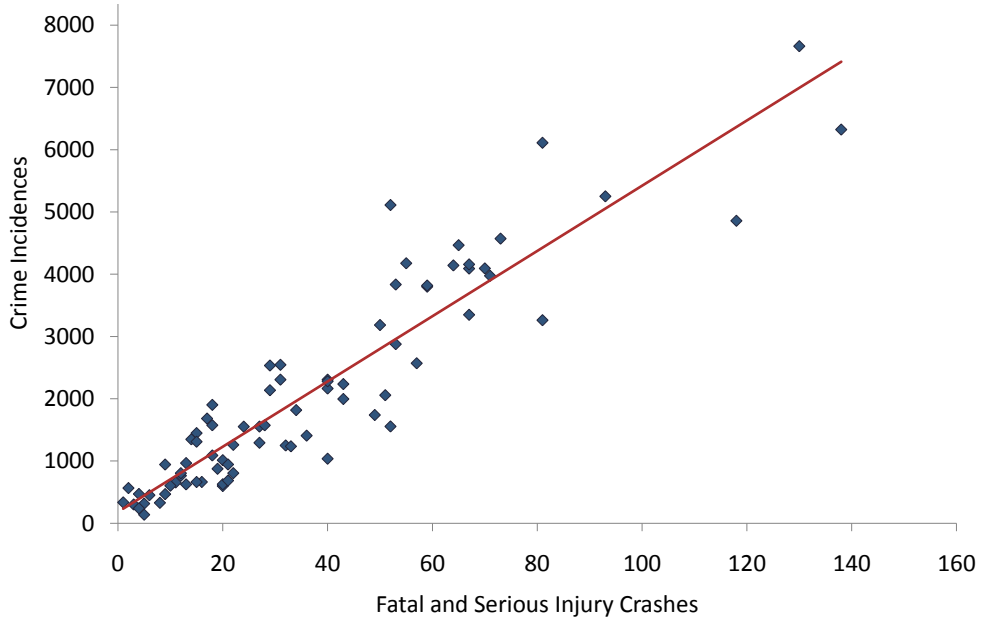
Table 3:
CTA Stations with Top Ten K&A Crashes

Line & Station	K&A Crashes
Green Line - King Drive	11
Red Line - North/Clybourn	11
Red Line - 95th/Dan Ryan	9
Green Line - Ashland/63rd	8
Blue Line - Irving Park	8
Red Line - 79th	8
Green Line - Laramie	7
Red Line - Cermak/Chinatown	7
Blue Line - Belmont	7
Green Line - 47th	6

CRIME

Numerous social and demographic characteristics, including crime, income, race, language spoken and walkability index, were analyzed to identify correlations with pedestrian crashes. The strongest correlation was found between crime and fatal and serious injury pedestrian crashes. **Figure 8** shows areas in Chicago with higher incidences of crime were more likely to see higher numbers of these most serious pedestrian crashes.

Figure 8:
Crimes vs. Fatal and Serious Injury Pedestrian Crashes



Pedestrian Crash Types

FAILURE TO YIELD

Of the 17 motorist actions recorded at the time of a pedestrian crash, the most common motorist action was failing to yield to pedestrians. When accounting only for known factors for motorist action, "failure to yield" was cited as the primary factor in pedestrian crashes 48 percent of the time, for both overall and fatal and serious injury crashes.

The most common motorist action contributing to pedestrian crashes was failure to yield

TURNING VEHICLES AT SIGNALIZED INTERSECTIONS

The most common vehicle maneuvers resulting in a pedestrian crash at signalized intersections were turning movements. Fifty-two percent of pedestrian crashes at signalized intersections involved turning vehicles (**Figure 9**). This number increased to 66 percent of crashes in the CBD. Specifically, left-turning vehicles accounted for 35.5 percent of the crashes citywide and 48 percent of the crashes in the CBD, outnumbering right-turning vehicles by more than 2 times.

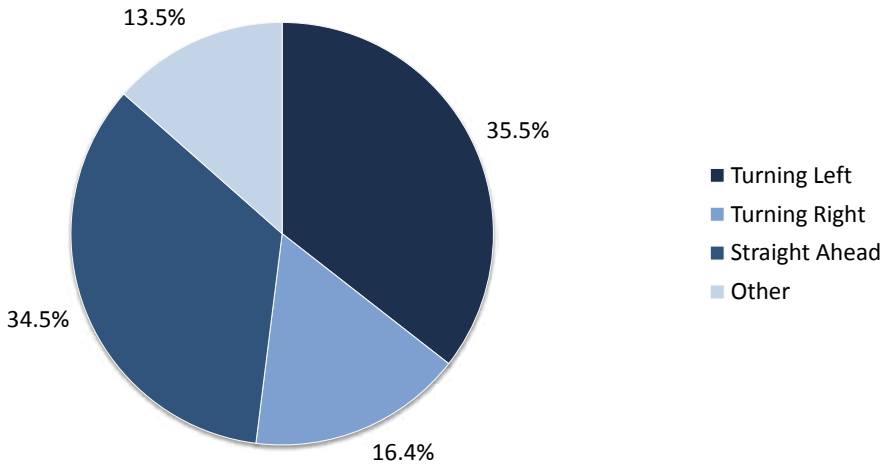


Figure 9:

Vehicle Maneuvers at Signalized Intersection Pedestrian Crashes

An average of almost two pedestrians were injured or killed every day in a hit and run crash

HIT AND RUN CRASHES

Hit and run crashes accounted for 33 percent of all pedestrian crashes and 40 percent of all fatal pedestrian crashes in Chicago. By comparison, hit and run crashes account for 20 percent of fatal pedestrian crashes nationwide. Over the five-year period, there were roughly two hit and run pedestrian crashes per day resulting in an injury or fatality.

Roadway Characteristics

ROADWAY CLASSIFICATION

Over 47 percent of all pedestrian crashes and roughly 50 percent of fatal and serious injury crashes occurred on arterial roadways, despite arterials only accounting for 10 percent of the total street miles in Chicago. Conversely, 23 percent of crashes occurred on local streets, which make up about 78 percent of the total street miles. However, 41 percent of youth crashes (0 to 14-year olds) occurred on local streets.

CROSSING LOCATION

Older pedestrians (60+) were struck more often in a crosswalk than other age groups and youth pedestrians (0 to 14-year olds) were struck more often mid-block and not in a crosswalk. **Figure 10** shows the pedestrian location by age group of the most significant categories. Other, less common categories, included crashes in which a pedestrian was struck in a driveway, a bikeway, or the location was unknown.

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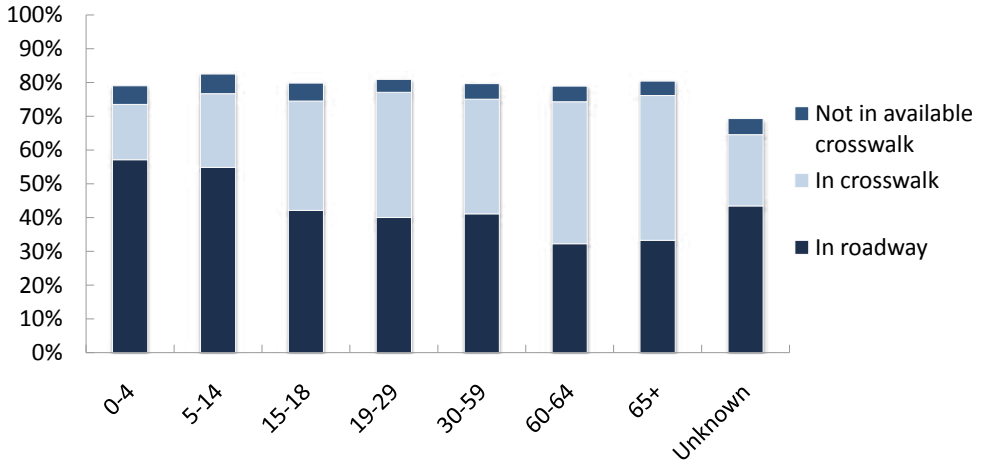

Figure 10:

Pedestrian Location by Age Group

(2005-2009)

Next Steps

The results of this analysis will guide current pedestrian safety initiatives and the development of future policy, engineering and public awareness efforts with Chicago's upcoming Pedestrian Plan. It will provide existing pedestrian crash conditions and serve as a benchmark for measuring the City of Chicago goals set forth in the Plan. This information will also inform upcoming pedestrian safety public awareness, supported by a grant from the National Highway Traffic Safety Administration.

As the preceding analysis illustrates, there have been truly significant improvements in pedestrian safety in Chicago over the last decade - representing an important milestone for Chicago. Yet even with these substantial improvements, the Chicago Department of Transportation and the Mayor's

Pedestrian Advisory Council are continuing to work to make Chicago a truly great city in which to be a pedestrian.

Together, CDOT and MPAC have identified a vision for Chicago's future as a pedestrian-focused city. This vision will be used to guide the work on Chicago's Pedestrian Plan. This vision reads:

> *The people of Chicago cultivate, encourage, and enjoy mutual respect on our streets. People choose to be pedestrians because the experience is the safest, most connected, accessible, and above all, the most enjoyable. Because we are committed to a strong pedestrian environment as an essential part of our complete transportation system, we are a healthier, more livable city.*

To ensure the realization of this vision, the Pedestrian Plan will include the findings from this analysis, input from key stakeholders, and an extensive public involvement process to identify strategies related to Safety, Connectivity, Livability, and Health. All of this will further strengthen Chicago's great pedestrian environment and ensure that the city continues our remarkable gains in pedestrian safety.

City of Chicago

Appendix B
2011 Pedestrian Crash Analysis, Technical Report

The City of Chicago 2011 Pedestrian Crash Analysis reports were prepared in 2011 using crash data from the years 2005-2009. The findings of these reports informed the next steps of the project which involved developing a campaign that would reach the target populations, locations, and behaviors identified in the crash analysis. The technical report contains the full analysis while the summary report compiles key findings and data.

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List of Acronyms

A	Serious Injury
ACS	American Community Survey
CBD	Central Business District
CCA	Chicago Community Area
CDOT	Chicago Department of Transportation
CPD	Chicago Police Department
CTA	Chicago Transit Authority
FARS	Fatality Analysis Reporting System
FHWA	Federal Highway Administration
GIS	Geographic Information System
IDOT	Illinois Department of Transportation
K	Fatality
NHTSA	National Highway Traffic Safety Administration

I Introduction

Identifying safety concerns through analyzing crash data is one of the initial steps outlined in *How to Develop a Pedestrian Safety Action Plan*, published by the Federal Highway Administration (FHWA). In 2007, the University of North Carolina Highway Safety Research Center prepared *Chicago Pedestrian-Motor Vehicle Collisions 2001-2005: Crash Factors and Spatial Analyses* (2001-2005 Study). The report identified the factors prevalent among motor vehicle crashes involving pedestrians and identified areas in the City of Chicago (Chicago) where these crashes occur.

This analysis builds off the previous effort with data from the five-year period of 2005 through 2009. The findings will inform the Chicago Department of Transportation (CDOT) on how to focus pedestrian safety efforts in the future. The comprehensive nature of this analysis will help CDOT determine where engineering improvements may be needed, how and where enforcement could play a role, and what educational messages should be imparted and to whom.

1 KEY FINDINGS

Trends in pedestrian crashes from 2005 through 2009

- Pedestrian crashes in Chicago have followed a downward trend since 2001
- Chicago has a low pedestrian fatality rate among peer cities

Who was involved in pedestrian crashes?

- The age group of 15 to 18-year-old pedestrians had the highest crash rate per population
- More males than females were involved in crashes as pedestrians and motorists; however, more females were involved in crashes in Chicago as compared to national statistics
- Taxi involvement in pedestrian crashes within the Central Business District (CBD) was 28%
- Taxi involvement in pedestrian crashes outside the CBD was 2%

When did the pedestrian crashes occur?

- From 2005 through 2009, Thursdays had the most crashes
- 3:00 – 6:00 p.m. was the high crash time period, 6:00 – 9:00 p.m. was the second highest crash time period

What were the roadway characteristics of pedestrian crashes?

- 50% of fatal and serious injury crashes occurred on arterial streets, despite accounting for approximately 10% of the street miles in Chicago, based on Illinois Department of Transportation roadway classification system
- Eight out of the top twelve neighborhood high crash corridors were 4-lane roadways; all were arterials
- 78% of all crashes and 80% of fatal and serious crashes occurred within 125 feet of the midpoint of an intersection; 53% of all crashes were recorded as intersection-related on crash reports
- Youth crashes, ages 0 to 14, were more likely to occur on local streets than other age groups (43% versus 23% overall)
- Overall, the majority (76%) of the crashes occurred on arterial and collector roadways
- Youth pedestrians (0 to 14) were more likely to be struck mid-block and not in a crosswalk than other age groups
- Older pedestrians were more likely to be struck in a crosswalk than other age groups

Where in Chicago did the pedestrian crashes occur?

- A band of community areas stretching from the Loop and Near North Side community areas on the east to the Austin community area on the west contained the highest number of overall and/or fatal and serious injury pedestrian crashes
- The top 4 Chicago Transit Authority rail stations for crash rates based on ridership were along the Green Line
- 79th Street contained three of the top twenty-two intersections for overall pedestrian crashes and two of the top twelve corridors for fatal and serious injury crashes
- The Austin community area contained three of the top twenty-two intersections for pedestrian crashes
- In an examination of various factors including crime, income, race, language spoken, and Walk Score®, the strongest correlation found was between pedestrian crashes and crime

What factors were most common in pedestrian crashes?

- Hit and run crashes account for 40% of fatal crashes in Chicago versus 20% nationally; hit and run crashes account for 33% of overall pedestrian crashes in Chicago
- Pedestrian injuries and fatalities in hit and run crashes average out to two per day.
- Of 20 recorded actions, the most common pedestrian action at the time of a crash was “crossing with a signal”; pedestrians crossing with the signal was more common in the CBD than outside
- Citywide, 49% of pedestrians who were struck at signalized intersections were crossing with a signal
- 60% of pedestrians in the central business district (CBD) were crossing with the signal
- 47% of pedestrians outside the CBD were crossing with the signal
- Citywide, 52% of pedestrian crashes at signalized intersections involved turning vehicles; 36% were left turns and 16% were right turns
- 66% of the crashes in the CBD involved turning vehicles; 48% were left turns and 17% were right turns
- 48% of the crashes outside the CBD involved turning vehicles; 32% were left turns and 16% were right turns

2 DATA AND ANALYSIS METHODS

2.1 Pedestrian Crashes

Crash data were provided for all traffic crashes within Chicago from 2005 through 2009 by the Illinois Department of Transportation (IDOT). All pedestrian crashes during this time period were analyzed.

The data were organized into three sets of files; crash, vehicle, and person. Case numbers unique to each individual crash link these data together. The file codes for each file type are provided in **Appendix A**.

The crash files contain one record for each crash and information regarding the crash location and the general conditions of the roadway and the environment. The crash files include a field, "Collision Type Code." The crashes with a type code of "Pedestrian" were analyzed in this study and are referred to simply as "pedestrian crashes." This type code includes all collisions involving a pedestrian and a motor vehicle in which the pedestrian was the first point of contact for the vehicle. If the vehicle struck another vehicle or object first, before striking the pedestrian, the crash is not coded as a pedestrian crash.

The vehicle files contain one record for each vehicle involved in crashes. These files were joined to the set of crash files that were extracted as pedestrian crashes. The vehicle files allowed examination of characteristics such as vehicle type and vehicle use.

The person files contain one record for each person involved in a crash. These include information about the condition of the driver and pedestrian and their actions prior to the crash. For information about motorists, the person files were joined to the crash file set of pedestrian crashes. For statistics regarding pedestrians, the person files were simply analyzed for all entries coded as "PersonType = Pedestrian." As such, it was possible to analyze the characteristics of all pedestrians involved in a crash instead of limiting it to those pedestrians who were struck first in a crash. For this reason, the analyses dealing with pedestrian characteristics that were drawn from the person files have a higher total than those analyses using the crash files. For instance, from the crash files, 17,487 crashes were coded as pedestrian crashes during this time period; however, from the person files, it is evident that there were 18,377 pedestrians involved in those crashes.

Additional data also were collected to complement the crash analysis. Roadway infrastructure, traffic control, and land use data were provided by the Chicago Department of Innovation and Technology. This information was useful in providing context such as the types of streets and intersections where crashes were occurring. US Census data from the 2005-2009 American Community Survey (ACS) were also used for general statistics on the population of Chicago. 2010 Census data were not available at the time of this study. Statistical analyses were performed on the crash data to identify trends in overall statistics and demographic, temporal, geographic, environmental, and behavioral factors. The information is presented throughout this report as maps, tables, and figures.

National data on pedestrian crashes were used as comparisons to the Chicago data. National pedestrian crash statistics were obtained from the National Highway Traffic Safety Administration (NHTSA) and Fatality Analysis Reporting System (FARS). In addition, comparisons are provided to findings from *The New York City Pedestrian Safety Study & Action Plan* (NYC Study), which included a pedestrian crash analysis. References to national statistics and the NYC Study are made throughout this report.

2.2 Pedestrian Exposure

It is difficult to interpret trends in crashes as there are many variables that affect the number of crashes occurring, including the number of vehicles and pedestrians. Another variable that is related to crashes is economic activity. During periods of recession, crashes often tend to decline while the opposite is true during periods of economic growth. One way to address this issue is to compare crashes to traffic counts and transit use over the same period as both measures provide an indication of potential pedestrian exposure to crashes.

Several attempts were made to account for pedestrian exposure in this crash analysis. Pedestrian traffic counts in the Central Business District (CBD) were provided by CDOT and public transit passenger volumes were provided by the Chicago Transit Authority (CTA). These data offered measures of pedestrian traffic and were used as comparisons to the number of crashes occurring.

US Census data also were used to determine pedestrian exposure. Data from the 2005-2009 ACS provided information about how Chicago residents travel to work. The number of people walking or taking transit to work was used as a measure of pedestrian exposure.

2.3 Correlations

Several sources of data were used to determine if pedestrian crashes correlate to various socioeconomic and environmental characteristics.

Using the 2005-2009 ACS data, correlations were analyzed for income, race, and language spoken at home. A correlation between pedestrian crashes and the walkability of a neighborhood was investigated using the neighborhoods' Walk Scores®. Walk Score® ranks an area on a scale of 0 to 100 based on the proximity of residents to destinations such as grocery stores, schools, restaurants, transit, and other daily needs.

Finally, crime statistics were compared to pedestrian crashes to determine if a correlation could be identified, using data from the Chicago Police Department (CPD) annual reports for 2005 through 2009. The annual reports include incidences of crime by Chicago Community Area (CCA). The statistics for the years 2005 through 2009 were averaged and compared to the average number of fatal and serious injury pedestrian crashes over the same time period in each CCA.

Of these factors, crime was the only variable that correlated to pedestrian crashes. **Figure 1** shows the correlation between crime and pedestrian crashes was very high. However, there may be many variables responsible for this correlation.

Figure 1: Crime vs. Fatal and Serious Injury Pedestrian Crashes by Chicago Community Area

II Crash Analysis

A comprehensive crash analysis is the first step in developing countermeasures for pedestrian safety, to understand who is involved in crashes, when and where they are occurring and the associated causes.

First, to provide a basic understanding of the state of pedestrian crashes in Chicago, **Section 3** presents the overall pedestrian crash statistics from 2005 through 2009. It also puts the crashes into context by comparing pedestrian crashes in Chicago to similar US cities.

The remainder of this report presents an in-depth analysis of the pedestrian crashes in Chicago between 2005 and 2009 by category: Demographic, Temporal, Geographic, Environmental, and Behavioral.

Section 4 presents the demographic analysis of the crash data and includes statistics on the age and gender of pedestrians and motorists as well as the race of pedestrians involved in crashes. **Section 5** is the temporal analysis and presents information on when the crashes occurred. **Section 6** provides a thorough analysis of the geographic distribution of crashes. In this section, crashes were analyzed at the neighborhood level, corridor level, and at spot locations, including intersections, transit stations, and schools.

Section 7 is the environmental analysis, which includes statistics on the light and weather conditions at the time of the crashes. It also includes statistics regarding the roadway conditions, such as the number of travel lanes or type of intersection where crashes occurred. In this analysis, the roadway conditions were considered as part of the pedestrian environment. **Section 8** presents the behavioral analysis. This includes information about what the motorist or pedestrian was doing at the time of the crash. For example, whether the motorist was turning or driving straight and whether the pedestrian was using a crosswalk or not.

Additional analyses were conducted at select locations of high crashes and of particular types of crashes to understand them in greater detail. These are included in Sections 7 and 8.

3 OVERALL CRASH STATISTICS

3.1 All Pedestrian Crashes

Between 2005 and 2009, 17,487 pedestrian crashes occurred and 18,377 pedestrians were involved in those crashes. This is a slight decrease from the 2001-2005 period, during which 18,689 crashes occurred involving 19,600 pedestrians.

On average, 3,497 pedestrian crashes occurred, involving 3,675 pedestrians, each year between 2005 and 2009. Of this five-year period, the most pedestrian crashes occurred in 2006, while 2009 had the least. **Figure 2** shows the total pedestrian crashes each year from 2001 to 2009. The number of crashes trended downward over the entire time period with an increase from 2005 to 2006. The number of pedestrians involved followed a similar downward trend. The number of pedestrians involved in crashes reached a high of 3,967 in 2006 and dropped to a low of 3,277 in 2009.

Figure 2: Total Pedestrian Crashes

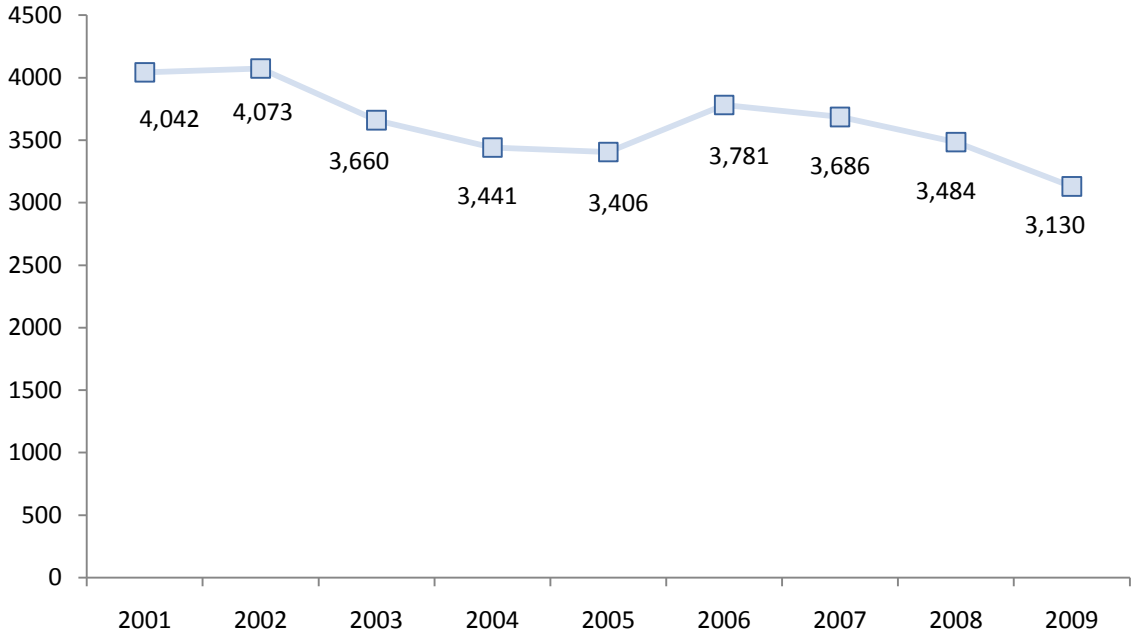
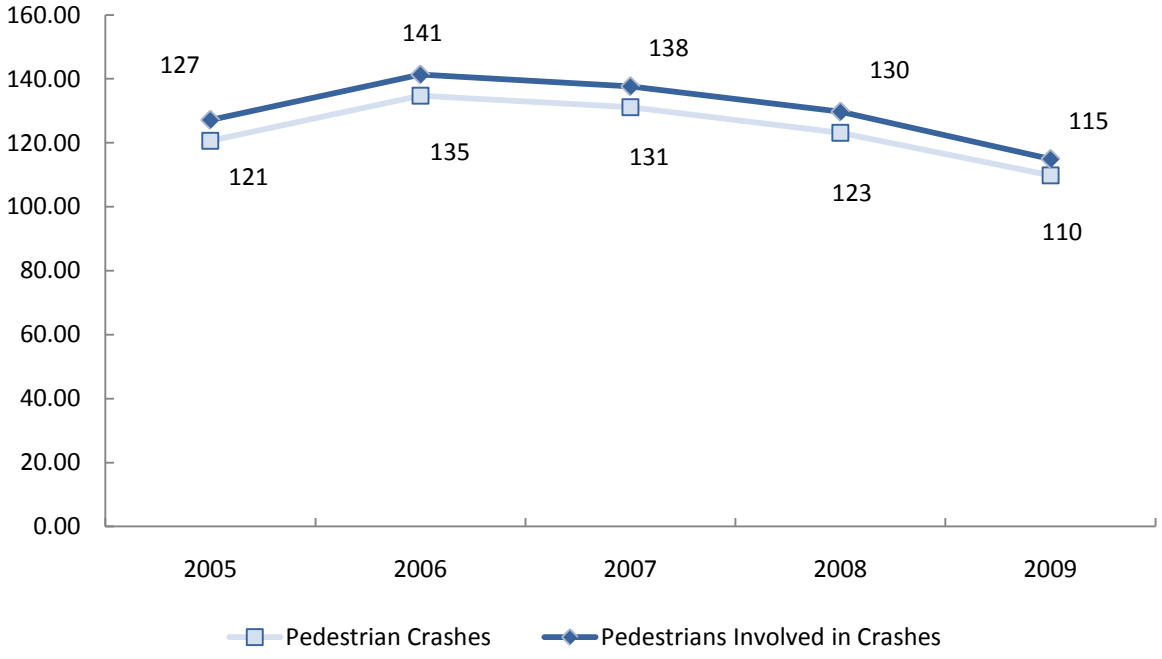


Figure 3 shows the number of crashes and the number of pedestrians involved in crashes with respect to the population of Chicago for each year. Using estimates from the US Census Bureau[1] and accounting for population, the rate of pedestrian crashes was the lowest in 2009 at 110 per 100,000 population. It was the highest in 2006 at 135. The 2001-2005 Study reported a crash rate of 140 in 2001 and 122 in 2005, but did not report the rates for the intermediate years.

Figure 3: Crash Rates per 100,000 Population



[1] US Census Bureau, Population Estimates, Incorporated Places and Minor Civil Divisions, Places over 100,000: 2000 to 2009, http://www.census.gov/popest/cities/SUB-EST2009.html.

3.2 Pedestrian Injury Severity

An injury code is assigned to each individual involved in a crash to define the severity of the injury sustained, if any. The codes and definitions are provided in the *Illinois Traffic Crash Report SR 1050: Instruction Manual for Law Enforcement Agencies* and are presented below. The entire instruction manual is provided in **Appendix B**. This analysis looks closely at the K and A crashes to learn details of those most serious crashes.

Injury Type		Definition
K	Fatal	A crash in which at least one person dies within 30 days of the crash.
A	Incapacitating Injury (Serious)	Any injury that prevents the person from walking, driving, or normally continuing the activities he/she was capable of prior to the injury. Includes severe lacerations, broken/distorted limbs, skull injuries, chest injuries, and abdominal injuries.
B	Non-incapacitating Injury	Any injury that is evident to observers at the scene of the crash. Includes lumps on the head, abrasions, bruises, and minor lacerations.
C	Reported, Not Evident	Any injury reported or claimed, which is not listed above. Includes momentary unconsciousness, claims of injuries not evident, limping, complaints of pain, nausea, hysteria.
O	None	No indication of injury.

Source: Illinois Traffic Crash Report SR 1050, 2009

Table 1 on the next page presents the number of pedestrian injuries by injury type. The portion of fatalities ranged from a high of 1.8% in 2005 of all pedestrians involved in crashes to a low of 1.0% in 2009, with an average of 1.4%. This is lower than the 1.8% average for 2001 through 2005. Together, fatal and serious injury crashes accounted for 16.3% of all crashes. Throughout this report, the rate of fatal and serious injury crashes to all pedestrian crashes will be presented for specific areas examined. The citywide rate of 16.3% will be referred to as comparison.

An average of 1.9% of pedestrians was reported as having no injuries. It is notable that the number of "no injury" crashes spiked in 2008 to 236 pedestrians, or 6.4%. The next highest reported year of no injuries was 2005 at 53.

Table 1: Pedestrian Injury Severity by Year

	2005	2006	2007	2008	2009	Total
Fatality	65	48	49	55	34	251
	1.8%	1.2%	1.3%	1.5%	1.0%	1.4%
A Injury	630	620	533	458	503	2,744
	17.5%	15.6%	13.8%	12.5%	15.3%	14.9%
B Injury	1,865	1,960	1,926	1,666	1,456	8,873
	51.9%	49.4%	49.8%	45.4%	44.4%	48.3%
C Injury	979	1,320	1,355	1,255	1,250	6,159
	27.3%	33.3%	35.0%	34.2%	38.1%	33.5%
No Injury	53	19	7	236	34	349
	1.5%	0.5%	0.2%	6.4%	1.0%	1.9%
Total	3,592	3,967	3,870	3,670	3,277	18,376
(Year %)	(19.5%)	(21.6%)	(21.1%)	(20.0%)	(17.8%)	100.0%

There appears to be a general downward trend in the number of fatal and serious injury crashes over this period. The citywide pedestrian fatality rate dropped from a high of 2.5 per 100,000 population in 2005 to a low of 1.2 in 2009. This represents a large decline in the fatality rate. When comparing these figures to the data from 2001 through 2004 for fatal crashes alone, the trend appeared to continue over the longer term, reaching an overall low in 2009. **Figure 4** shows the number of pedestrian crashes that resulted in fatalities from 2001 through 2009.

Figure 4: Pedestrian Fatalities

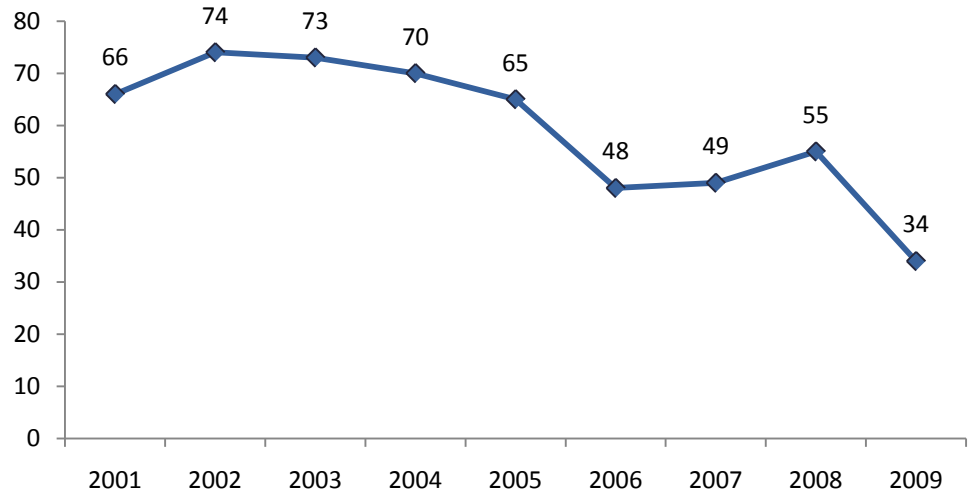
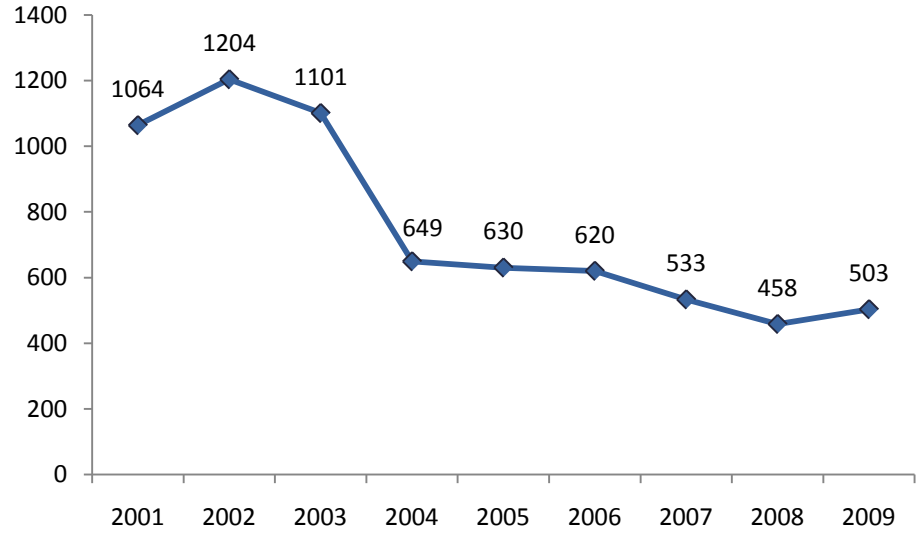


Figure 5 shows the number of crashes that resulted in serious injury for a pedestrian from 2001 through 2009. This indicates a downward trend from 2004 through 2009 after a sharp decline from the 2001 to 2003 time period. As noted in the 2001-2005 Study, this decline may be a result of changes in the crash report that were instituted in 2004. A new reporting system was implemented that changed the coding of several fields.

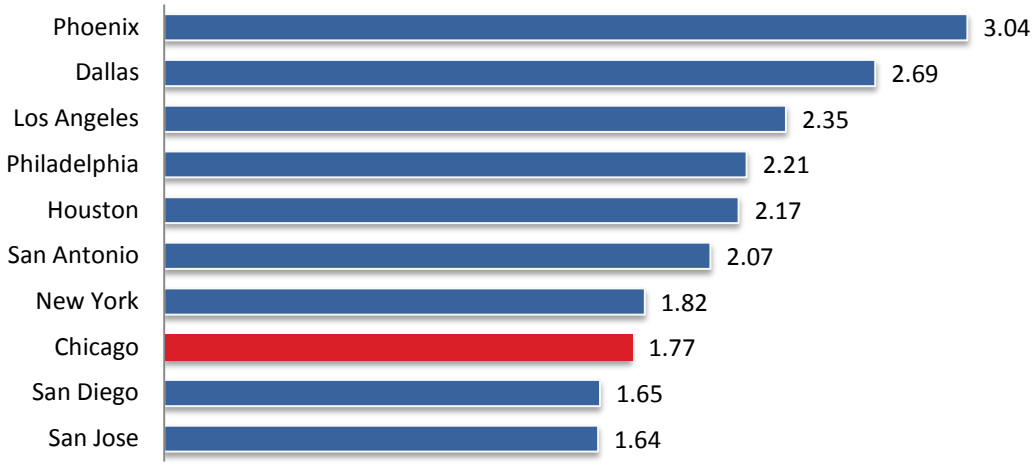
Figure 5: Pedestrian Serious Injuries



3.3 City Comparisons

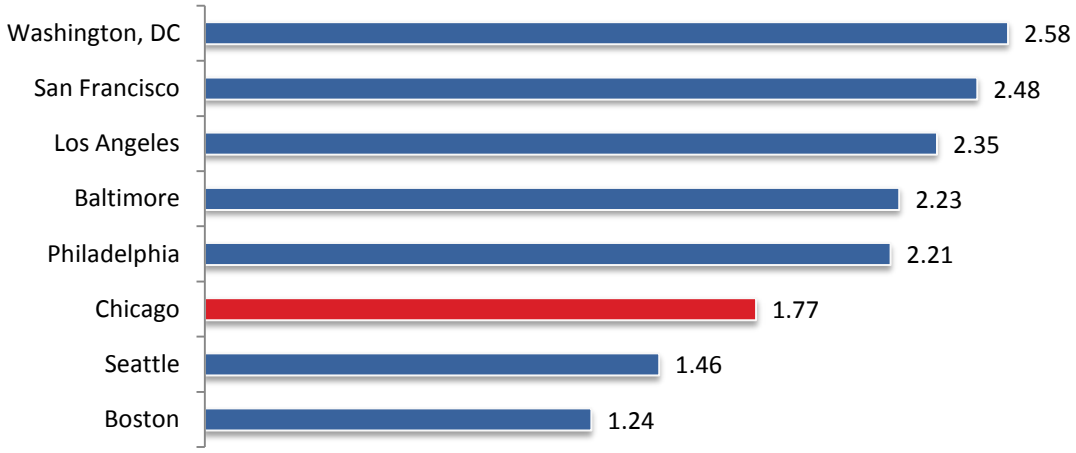
To gain perspective on the magnitude of pedestrian fatalities in Chicago, the fatality rates of other US cities with high populations and similar population densities were compared. **Figure 6** on the next page shows the fatality rates per 100,000 population of Chicago and the top ten cities in the US, by population. Of these cities, only San Diego and San Jose have fatality rates lower than Chicago.

Figure 6: Pedestrian Fatalities per 100,000 Population (2005-2009) of Top Ten Cities by Population[2]



Many of the top ten cities by population have much different population densities than Chicago and likely have lower volumes of pedestrian activity. Thus, in order to compare Chicago to more similar cities, pedestrian fatalities by population were compared among cities with similar population densities and similar rates of population who walk or take transit to work. **Figure 7** shows cities with a population density between 7,000 and 17,000 people per square mile. Chicago's density was 12,750 according to the US Census. These cities also have similar rates of population who walk or take transit to work.[3]

Figure 7: Pedestrian Fatalities per 100,000 Population (2005-2009) of Cities with Similar Population Densities



[2] Data sources: National Highway Traffic Safety Administration, US Census Bureau

[3] http://www.telestrian.com, Telestrian, LLC, accessed on April 5, 2011.

Figure 8 compares the percentage of all traffic fatalities that are pedestrians per city for the top ten cities in the US by population. These data show that Chicago is in the middle of the group.

Figure 8: Proportion of Pedestrian Fatalities to All Traffic Fatalities (2005-2009) in Top Ten Cities by Population

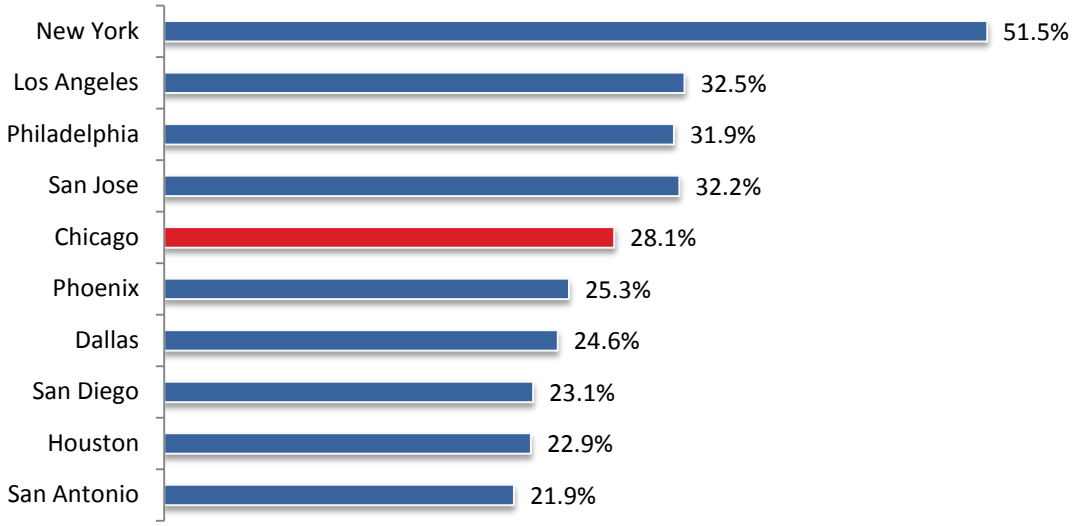
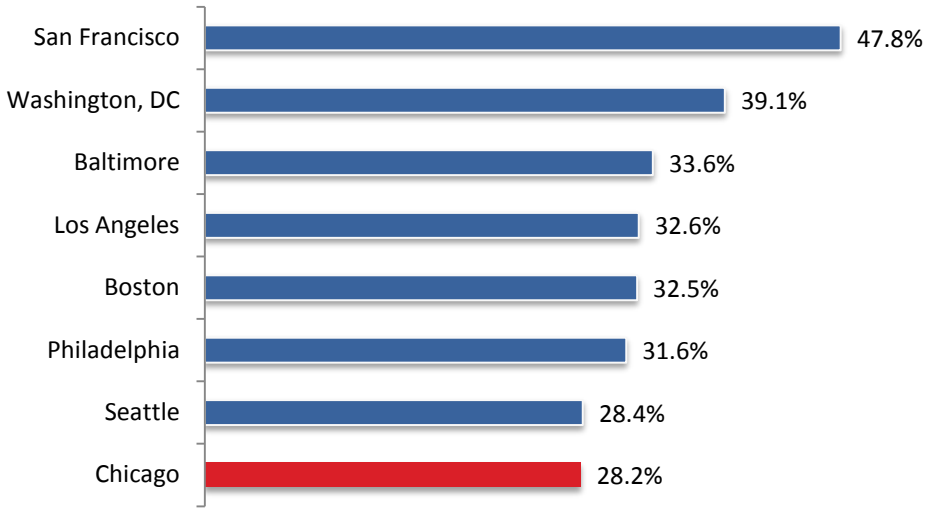


Figure 9 compares the percentage of all traffic fatalities that are pedestrians for cities with similar population densities. These data show that Chicago has a lower percentage of traffic fatalities that are pedestrians than all of the comparable cities.

Figure 9: Proportion of Pedestrian Fatalities to All Traffic Fatalities (2005-2009) in Cities with Similar Population Densities



It can be concluded from this that, relatively speaking, Chicago has a safe pedestrian environment given the volume of traffic.

4 DEMOGRAPHIC

A demographic analysis was conducted to better understand who was involved in pedestrian crashes, both as pedestrians and as motorists. The age, gender and race of pedestrians and motorists involved in all crashes and fatal and serious injury crashes were considered. These were compared to the 2001-2005 Study and trends were identified, where applicable.

4.1 Pedestrian Age Group

Pedestrian crashes were broken down by age groups to determine if certain groups are overrepresented in crashes or certain types of crashes. This breakdown aligns with groups that could be targeted for focused education, enforcement or related activities. The age groups considered are as follows:

0-4: Pre-school aged youth

5-14: Primary school aged youth

15-18: High school aged youth

19-29: Adults

30-59: Adults

60-64: Adults

65+: Seniors

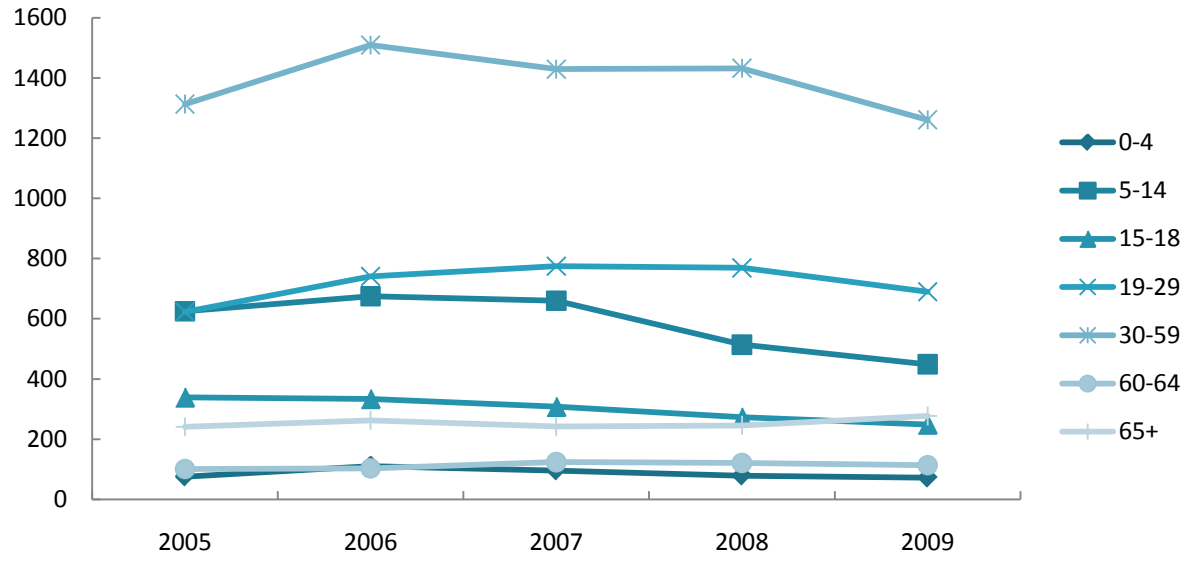
Table 2 shows the number of pedestrians involved in crashes for each age group and **Figure 10** presents a graph of these data, showing the trend over time.

Table 2: Age of Pedestrian Involved in Crashes by Year

	2005	2006	2007	2008	2009	Total
0-4	76	111	96	79	72	434
	2.1%	2.8%	2.5%	2.2%	2.2%	2.4%
5-14	625	675	660	514	449	2,923
	17.4%	17.0%	17.1%	14.0%	13.7%	15.9%
15-18	339	334	308	273	249	1,503
	9.4%	8.4%	8.0%	7.4%	7.6%	8.2%
19-29	623	741	775	769	690	3,598
	17.3%	18.7%	20.0%	21.0%	21.1%	19.6%
30-59	1,313	1,509	1,429	1,432	1,261	6,944
	36.6%	38.0%	36.9%	39.0%	38.5%	37.8%
60-64	101	103	124	121	114	563
	2.8%	2.6%	3.2%	3.3%	3.5%	3.1%
65+	241	263	242	246	277	1,269
	6.7%	6.6%	6.3%	6.7%	8.5%	6.9%
Unknown	274	231	236	236	165	1,142
	7.6%	5.8%	6.1%	6.4%	5.0%	6.2%
Total	3,592	3,967	3,870	3,670	3,277	18,376
(Year %)	(19.5%)	(21.6%)	(21.1%)	(20.0%)	(17.8%)	100.0%

These data show a declining trend in the number of pedestrian crashes in the 5-14 age group and the 15-18 age group over the five-year period. The number of crashes involving other age groups appears relatively constant over this period.

Figure 10: Age of Pedestrian Involved in Crashes

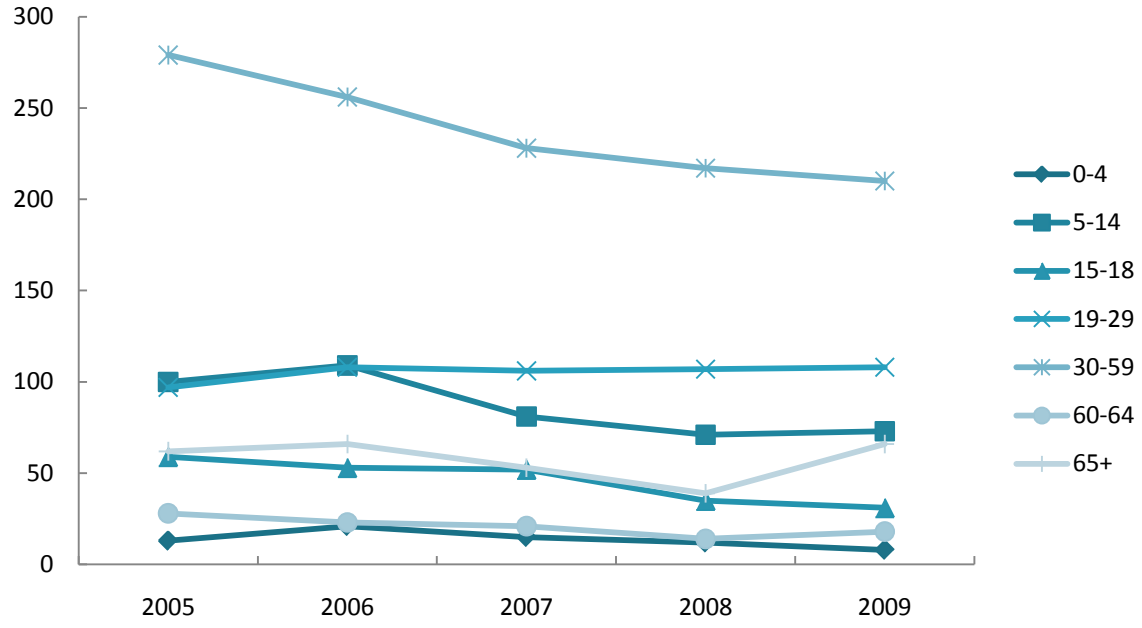


A pronounced decline in fatal and serious injury crashes is evident among the 30-59 age group over the time period. Among the age groups 5-14 and 15-18, declines similar to those observed with overall crashes are evident. The 65+ age group shows a gradual decrease in fatal and serious injury crashes through 2008, followed by an uptick in 2009. These results are presented in **Table 3** and displayed in **Figure 11**.

Table 3: Fatal and Serious Injury Pedestrian Crashes by Age Group

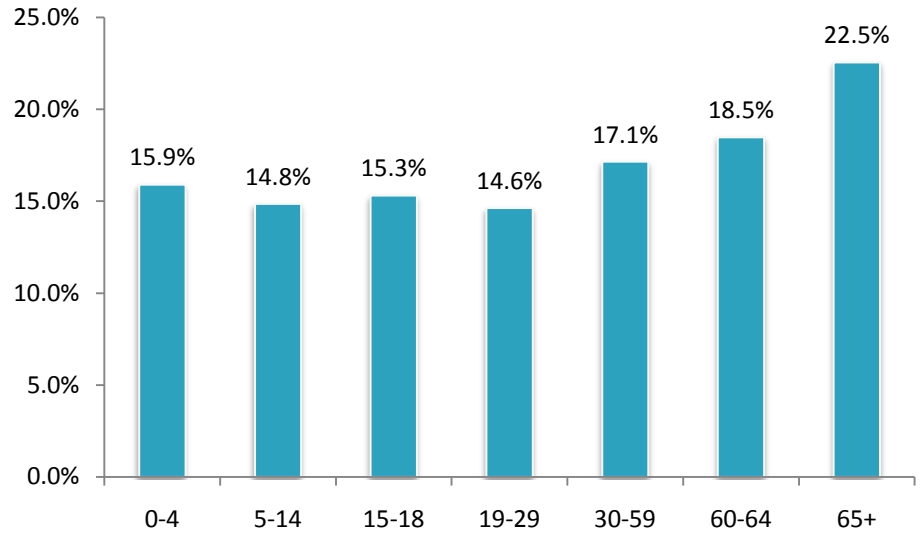
	2005	2006	2007	2008	2009	Total
0-4	13	21	15	12	8	69
	1.9%	3.1%	2.6%	2.3%	1.5%	2.3%
5-14	100	109	81	71	73	434
	14.4%	16.3%	13.9%	13.8%	13.6%	14.5%
15-18	59	53	52	35	31	230
	8.5%	7.9%	8.9%	6.8%	5.8%	7.7%
19-29	97	108	106	107	108	526
	14.0%	16.2%	18.2%	20.9%	20.1%	17.6%
30-59	279	256	228	217	210	1,190
	40.1%	38.3%	39.2%	42.3%	39.1%	39.7%
60-64	28	23	21	14	18	104
	4.0%	3.4%	3.6%	2.7%	3.4%	3.5%
65+	62	66	53	39	66	286
	8.9%	9.9%	9.1%	7.6%	12.3%	9.5%
Unknown	57	32	26	18	23	156
	8.2%	4.8%	4.5%	3.5%	4.3%	5.2%
Total	695	668	582	513	537	2,995
(Year %)	(23.2%)	(22.3%)	(19.4%)	(17.1%)	(17.9%)	100.0%

Figure 11: Fatal and Serious Injury Pedestrian Crashes by Age Group



Of note is the percentage of fatal and serious injury crashes involving seniors. Between 2005 and 2009, seniors were involved in 9.5% of the fatal and serious injury crashes but only 6.2% of overall crashes. Of the 1,269 crashes involving seniors, 49 (4.0%) resulted in fatalities and 231 (18.2%) in serious injuries. For comparison, the percentages of fatalities and serious injuries for all age groups combined were 1.4% and 14.9%, respectively. **Figure 12** shows the percentage of fatal and serious injury to all pedestrian crashes by age group. The rates increase from age 30 up.

Figure 12: Fatal and Serious Injury Pedestrian Crashes as Percentage of All Pedestrian Crashes (2005-2009) by Age Group



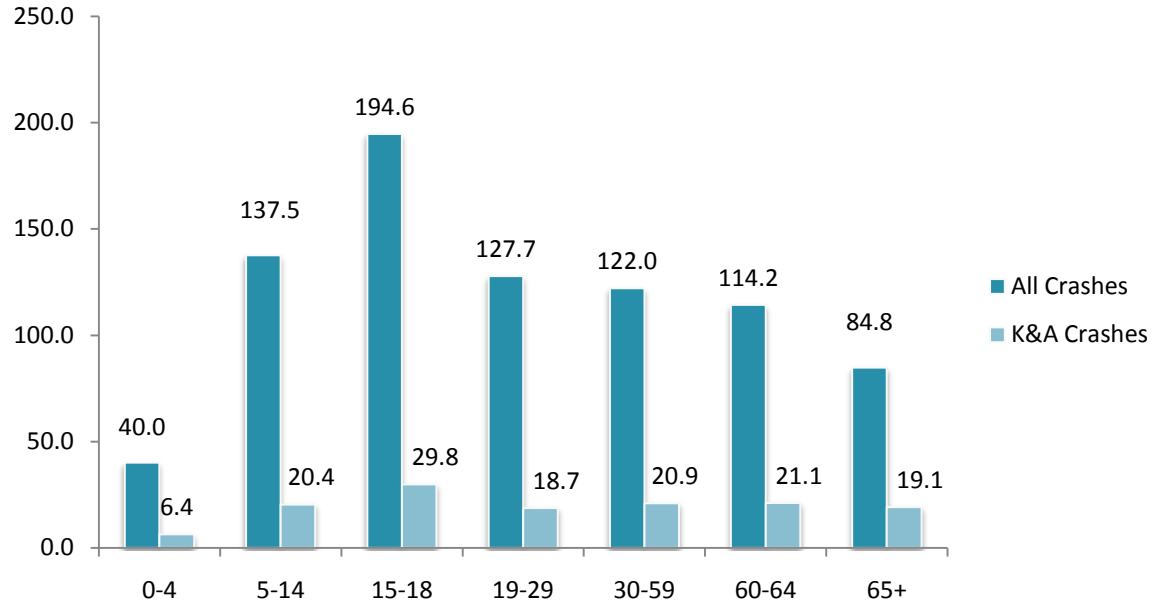
The higher proportion of fatal and serious injury crashes among seniors was likely related to their higher physical fragility relative to the overall population. Older pedestrians have a much greater risk of dying than younger pedestrians in a crash of similar severity. Studies have found that a 79-year old man is 3.2 times as likely to die as a 32-year old man in a crash of the same severity. A similar relationship holds among females[4,5].

[4] Henary B, Ivarsson J, Crandall JR. "The Influence of Age on the Morbidity and Mortality of Pedestrian Victims." Traffic Injury Prevention, 2006, 7(2): 182-190.

[5] Evans, Leonard, "Traffic Safety," Bloomfield Hills, MI: Science Serving Society, 2004. ISBN 0975487108.

When accounting for the population of each age group in Chicago, the 15-18 age group had a significantly higher crash rate than the remaining age groups at 194.6 per 100,000 population. This was followed by the 5-14 age group at 137.5. The lowest crash rate was among the 0-4 age group with 40.0 and the second to lowest was among seniors (65+) at 84.8. The crash rates for age groups 19-29, 30-59, and 60-64 decreased steadily from 127.7 to 114.2. The peak of fatal and serious injury crashes also occurred among the 15-18 age group. **Figure 13** shows these results.

Figure 13: Pedestrian Crash Rate per 100,000 Population (2005-2009) by Age Group



4.2 Motorist Age Group

Crashes also were broken down by driver age group to better understand driver involvement. The motorist age groups considered are as follows:

16-18: Newly licensed drivers (some on graduated license)

19-24: Young drivers

25-44: Young middle age drivers

45-64: Older middle age drivers

65+: Senior drivers

Figure 14 shows the total number of pedestrian crashes involving motorists in each age group. Information on the number of licensed drivers living in Chicago was not available to provide comparisons. It is difficult to draw clear conclusions about relative driver involvement in pedestrian crashes by age group without having access to exposure data for the amount of driving

by each group. However, these data show that the 25-44 age group was involved in more crashes than the 45-64 age group.

Figure 14: Age of Motorist Involved in Pedestrian Crashes

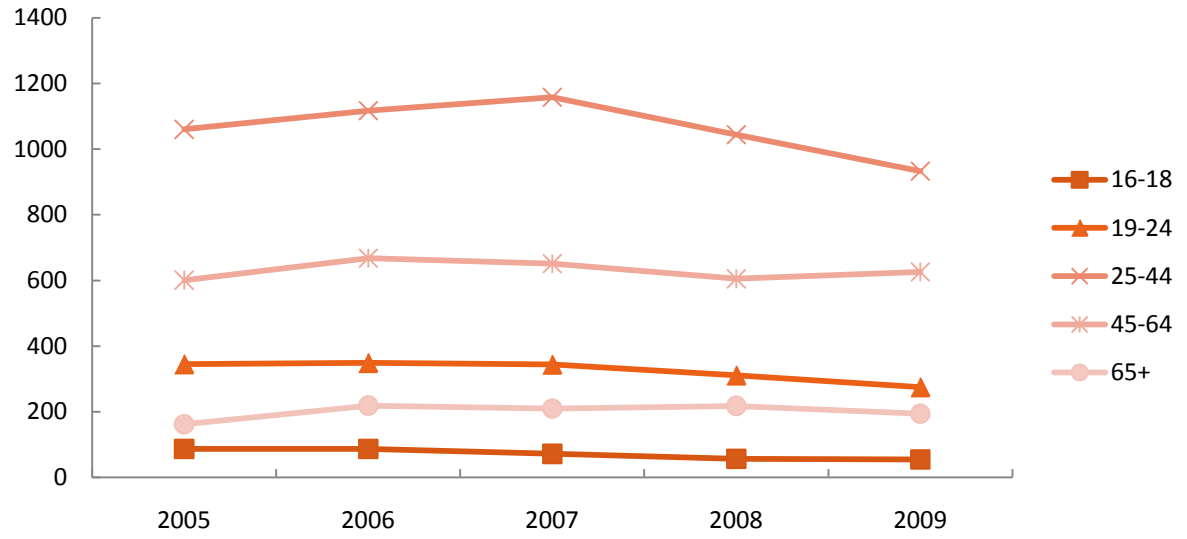
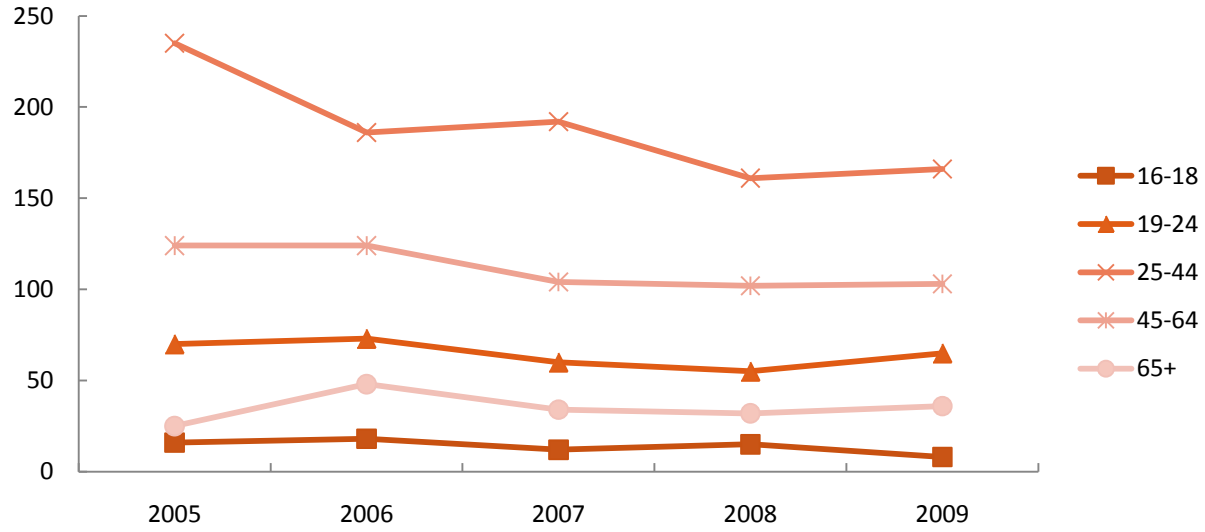


Figure 15 shows the motorist involvement, by age group, in fatal and serious injury pedestrian crashes by year. These data show a marked decline in the 25-44 year age group over the 5-year period.

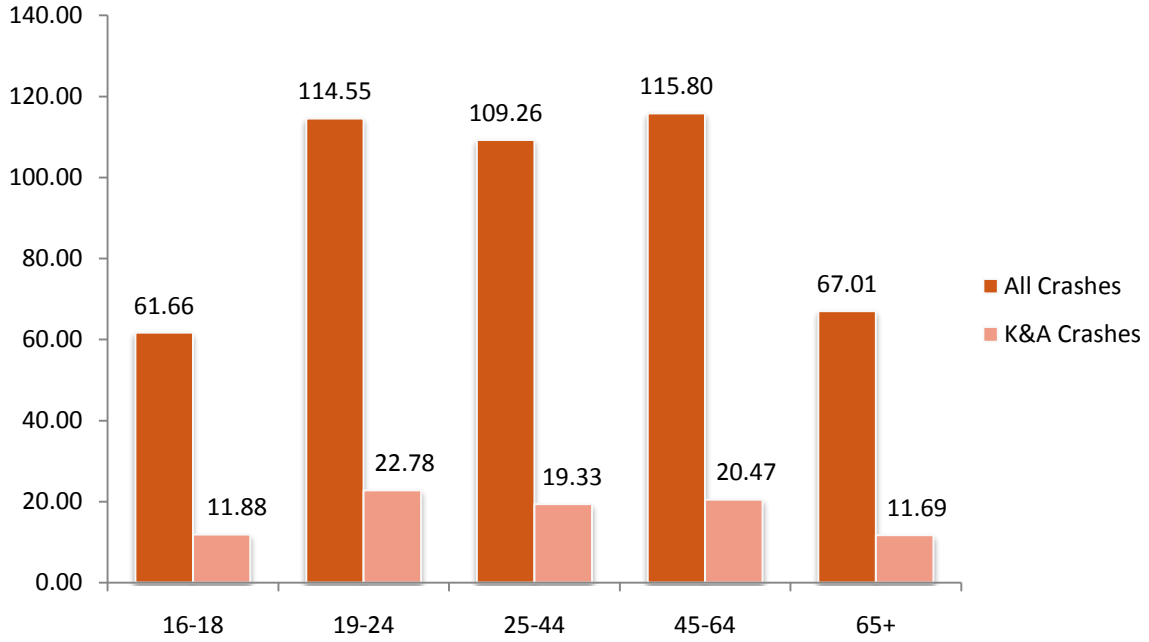
Figure 15: Age of Motorist Involved in Fatal and Serious Injury Pedestrian Crashes by Year



When factoring for the population in each age group, the 19-24, 25-44, and 45-64 age groups have similar pedestrian crash rates in both overall and fatal and serious injury crashes. **Figure 16** shows motorist age group crash rates by population within Chicago. The 19-24 age group has the highest rate for fatal and serious injury pedestrian crashes of all age groups. The low

rate for the 16-18 and 65+ age groups is likely related to lower driving rates. Other factors that may be responsible for the lower proportion in the 16-18 group are that many drivers in this age group have probationary licenses which restrict driving conditions and the lower income coupled with the higher insurance rates for this age group make it more costly to own and operate a car. In the case of senior drivers (65+) there is evidence that they drive less overall, and particularly during hours of high traffic volumes when crashes are more likely to occur.

Figure 16: Rates of Motorists Involved in Pedestrian Crashes per 100,000 Population (2005-2009) by Age Group



The crashes involving younger motorists were more likely to result in fatalities and serious injuries. The rates of fatal and serious injury crashes to all crashes were highest among the 16-18 and 19-24 age groups at 19.3% and 19.9%, respectively. The same rate for motorists aged 25 through 64 was 17.7% and the 65+ age group was 17.4%.

4.3 Pedestrian Gender

Male pedestrians were involved in more crashes and more fatal and serious injury crashes than females, despite accounting for less of the population as a whole. Over the five-year period, 52% of the pedestrians involved in crashes were male, despite making up only 48% of the population of Chicago. Of the fatal and serious injuries, 54% were male. However, a higher proportion of crashes involved females in Chicago, at 45%, than nationally, where roughly 31% of the pedestrians involved in crashes are female.[6] The Chicago data is displayed in **Table 4.**

Table 4: Gender of Pedestrians Involved in Crashes

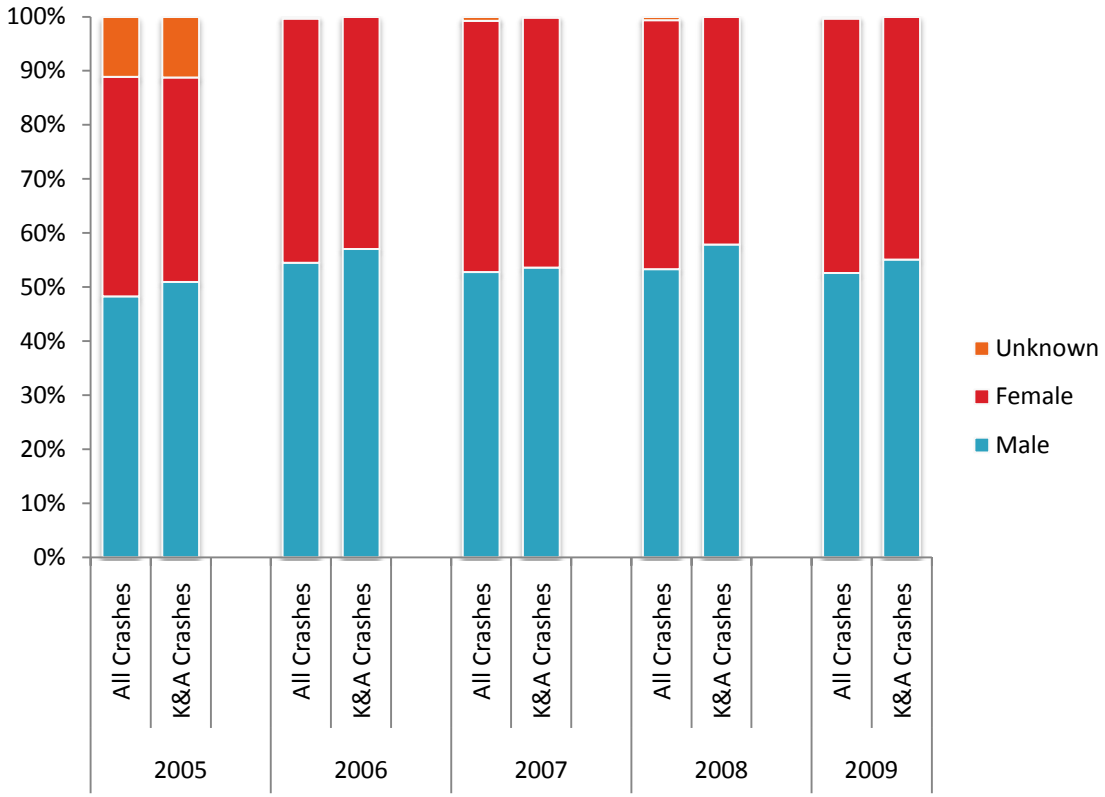
	2005	2006	2007	2008	2009	Total
All Crashes						
Male	1,735	2,163	2,042	1,957	1,724	9,621
	48.3%	54.5%	52.8%	53.3%	52.6%	52.4%
Female	1,459	1,792	1,800	1,690	1,542	8,283
	40.6%	45.2%	46.5%	46.0%	47.1%	45.1%
Unknown	398	12	28	23	11	472
	11.1%	0.3%	0.7%	0.6%	0.3%	2.6%
Total	3,592	3,967	3,870	3,670	3,277	18,376
(Year %)	(19.5%)	(21.6%)	(21.1%)	(20.0%)	(17.8%)	100.0%
Fatal and Serious Injury Crashes						
Male	354	381	312	297	296	1,640
	50.9%	57.0%	53.6%	57.9%	55.1%	54.8%
Female	263	287	269	216	241	1,276
	37.8%	43.0%	46.2%	42.1%	44.9%	42.6%
Unknown	78	0	1	0	0	79
	11.2%	0.0%	0.2%	0.0%	0.0%	2.6%
Total	695	668	582	513	537	2,995
(Year %)	(23.2%)	(22.3%)	(19.4%)	(17.1%)	(17.9%)	100.0%

The 2001-2005 Study found that the proportion of crashes involving males had decreased over the five-year period. This trend has continued through 2009. The data presented here includes all pedestrians involved in crashes, whereas the data from the 2001-2005 Study includes only crashes that were coded as pedestrian crashes. Thus, the previous study only includes the pedestrians who were first struck by an automobile. For this reason, the results vary slightly for 2005 and are not directly comparable. However, the trend remained consistent.

[6] National Highway Traffic Safety Administration, "National Pedestrian Crash Report," US Department of Transportation, June 2008.

Both data sets show that gender was recorded as unknown or not recorded in roughly 11% of the crashes in 2005. In all other years, the percentage of unknown crashes was extremely low or negligible. **Figure 17** shows this data graphically.

Figure 17: Gender of Pedestrians Involved in Crashes



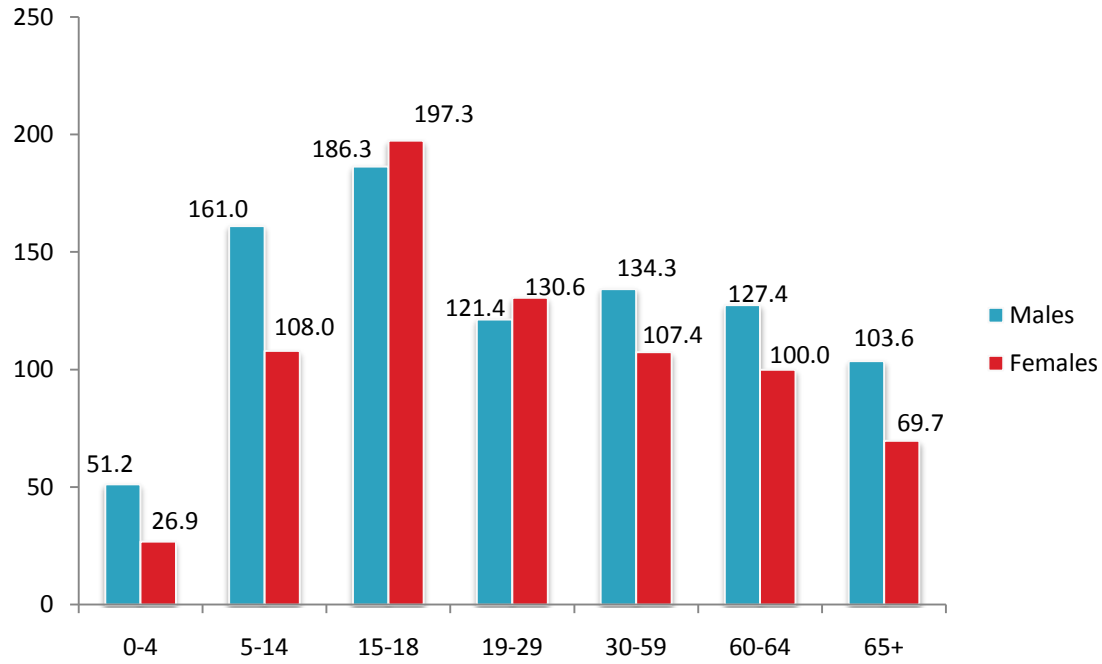
Looking at pedestrian gender in greater detail reveals that females were involved in more crashes than males in the 15-18, 19-29, and 65+ age groups (see **Table 5**). These data differ from findings in the NYC Study, where males were more involved in serious and fatal pedestrian crashes than females for all age groups.

Table 5: Pedestrian Gender by Age Group

	0-4	5-14	15-18	19-29	30-59	60-64	65+	Un-known	Total
Males	285	1,743	729	1,700	3,743	279	605	532	9,616
	65.7%	59.6%	48.5%	47.2%	53.9%	49.6%	47.8%	46.8%	52.4%
Females	142	1,126	752	1,849	3,118	274	636	380	8,277
	32.7%	38.5%	50.0%	51.4%	44.9%	48.7%	50.3%	33.5%	45.1%
Unknown /Missing	7	54	22	49	83	10	24	224	473
	1.6%	1.8%	1.5%	1.4%	1.2%	1.8%	1.9%	19.7%	2.6%
Total	434	2,923	1,503	3,598	6,944	563	1,265	1,136	18,366

Figure 18 shows these data normalized for population by gender in each age group. Even when accounting for the breakdown in population, female involvement in crashes surpassed male involvement in crashes in the 15-18 and 19-29 age groups. It is also evident from this graph that the biggest discrepancy between genders occurred in the 5-14 age group.

Figure 18: Pedestrian Crash Rate per 100,000 Population (2005-2009) by Gender and Age Group



4.4 Motorist Gender

Similar to the results for pedestrian gender, male drivers were more likely to be involved in pedestrian crashes than female drivers. Considering all pedestrian crashes, 46% of drivers were male, 26% were female, and 28% were unknown. Focusing on fatal and serious injury crashes only, 48% of drivers were male, 27% were female, and 25% were unknown. The ratios remained fairly consistent throughout the five-year period. These data are shown in **Table 6**.

Table 6: Gender of Motorists Involved in Pedestrian Crashes

	2005	2006	2007	2008	2009	Total
All Crashes						
Male	1,531	1,769	1,728	1,564	1,458	8,050
	44.6%	46.6%	46.8%	44.6%	46.4%	45.8%
Female	860	980	957	911	835	4,543
	25.0%	25.8%	25.9%	26.0%	26.6%	25.8%
Unknown	1,044	1,050	1,011	1,031	852	4,988
	30.4%	27.6%	27.4%	29.4%	27.1%	28.4%
Total	3,435	3,799	3,696	3,506	3,145	17,581
(Year %)	(19.5%)	(21.6%)	(21.0%)	(19.9%)	(17.9%)	100.0%
Fatal and Serious Injury Crashes						
Male	328	289	281	256	266	1,420
	48.4%	43.9%	49.2%	50.7%	50.7%	48.3%
Female	165	192	152	136	142	787
	24.3%	29.1%	26.6%	26.9%	27.0%	26.8%
Unknown	185	178	138	113	117	731
	27.3%	27.0%	24.2%	22.4%	22.3%	24.9%
Total	678	659	571	505	525	2,938
(Year %)	(23.1%)	(22.4%)	(19.4%)	(17.2%)	(17.9%)	100.0%

Among the known cases, males are involved in 63.9% of the crashes and females 36.1%. This is similar to what was found in the 2001-2005 Study, in which 65.6% of the crashes involved male drivers.

Again, the difference between male and female driver involvement is less in Chicago than nationally. However, national statistics report fewer in the "unknown" category. Nationally, 65% of drivers involved in fatal pedestrian crashes were male, 25% were female, and 10% were unknown (as compared to 25% in Chicago.)[7]

Among drivers, the unknown gender was likely due to hit and run crashes. An average of 33% of pedestrian crashes were hit and runs over this five-year period. While this is higher than the percentage of "unknown" driver genders, some hit and run driver genders are presumably recorded through witness accounts of the crash or because the driver is eventually found. Hit and run crashes are examined in more detail in **Section 8.1**.

[7] National Highway Traffic Safety Administration, "National Pedestrian Crash Report," US Department of Transportation, June 2008.

4.5 Pedestrian Race and Ethnicity

The *Illinois Traffic Crash Report SR 1050* does not include fields to report information on the race of people involved in crashes. Therefore, information on race and ethnicity was collected for fatal crashes only from FARS, which is a national database of traffic-related fatalities. FARS is maintained by NHTSA. FARS data include information obtained from death certificates of those involved in crashes. **Table 7** shows these results along with the breakdown by race and Hispanic origin of the population of Chicago, for comparison. These data include an anomaly of pedestrians of unknown race in 2008, at almost 93% of the fatalities. Thus, the overall breakdown may be biased due to the large number of unknowns in 2008.

Please note that the category Hispanic includes all people who identified as Hispanic, regardless of race, i.e. a pedestrian who identified as white and Hispanic is included in the total count under Hispanic and not under white. In 2009, for instance, 18 of the pedestrian fatalities were white. However, 7 of those identified as Hispanic. An additional 2 pedestrian fatalities were of Hispanic origin that year.

Table 7: Pedestrian Fatalities by Race and Ethnicity

	2005	2006	2007	2008	2009	Total	% of Chicago Population[8]
White Alone, Not Hispanic or Latino	19	23	7	2	11	62	32.5%
	28.8%	47.9%	14.0%	3.6%	32.4%	24.4%	
Black or African American Alone	25	15	21	1	10	72	33.8%
	37.9%	31.3%	42.0%	1.8%	29.4%	28.3%	
Hispanic or Latino	16	8	15	0	9	48	27.4%
	24.2%	16.7%	30.0%	0.0%	26.5%	18.9%	
Asian Alone	2	2	1	1	2	8	4.9%
	3.0%	4.2%	2.0%	1.8%	5.9%	3.1%	
Unknown	4	0	6	52	2	64	NA
	6.1%	0.0%	12.0%	92.9%	5.9%	25.2%	
Total	66	48	50	56	34	254	

Excluding the values for 2008, the race breakdown changes slightly. People who identified as white accounted for 30.3%, blacks accounted for 35.9%, Hispanics accounted for 24.2%, and Asians accounted for 3.2% of pedestrian fatalities. This indicates that only Blacks were overrepresented in fatal crashes, compared to their population proportion.

No trends in increasing or decreasing pedestrian fatalities are evident among these data.

[8] US Census, 2005-2009 American Community Survey

5 TEMPORAL

Descriptive analyses were performed to understand when the pedestrian crashes occurred. These analyses included crashes per month, day, and hour and compared overall crashes to fatal and serious injury crashes. The results were also compared to the 2001-2005 Study.

5.1 Month

The pedestrian crash distribution by month is presented in **Figure 19** and **Table 8** on the next page. These data show a relatively flat distribution with the lowest number of crashes occurring in February, when the average over the five years was 251 pedestrian crashes and the highest number of crashes occurring in June, with an average of 324. The 2001-2005 Study also showed February having the lowest number of crashes and showed June and July as the highest crash months.

Figure 19: Average Pedestrian Crashes by Month (2005-2009)

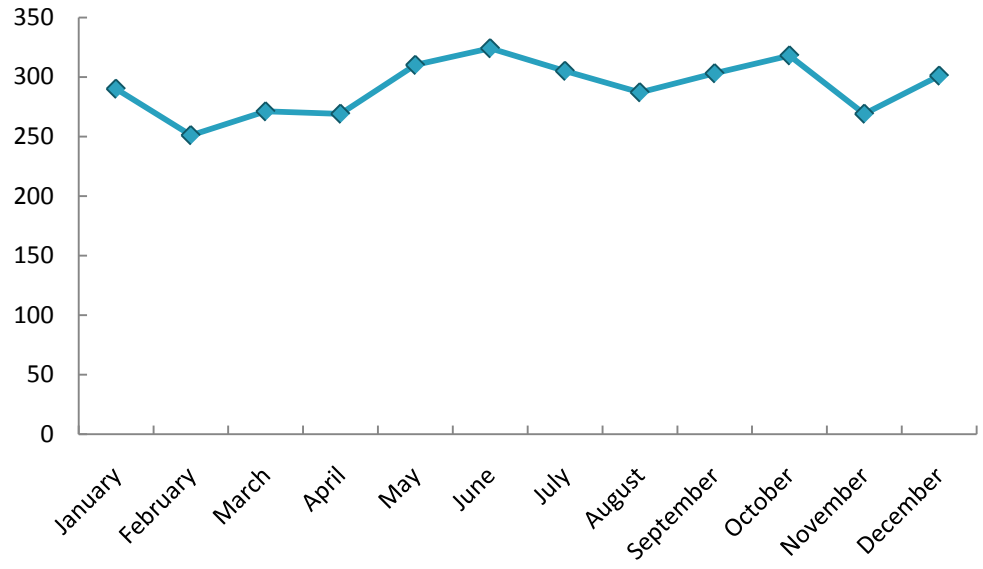


Table 8: Pedestrian Crashes by Month

	2005	2006	2007	2008	2009	Total
January	244	268	331	365	242	1,450
	7.2%	7.9%	9.7%	10.7%	7.1%	8.3%
February	219	240	242	276	278	1,255
	6.4%	6.3%	6.6%	7.9%	8.9%	7.2%
March	246	301	302	264	240	1,353
	7.2%	8.0%	8.2%	7.6%	7.7%	7.7%
April	254	304	255	282	252	1,347
	7.5%	8.0%	6.9%	8.1%	8.1%	7.7%
May	263	362	321	312	294	1,552
	7.7%	9.6%	8.7%	9.0%	9.4%	8.9%
June	314	343	359	322	281	1,619
	9.2%	9.1%	9.7%	9.2%	9.0%	9.3%
July	276	352	324	307	266	1,525
	8.1%	9.3%	8.8%	8.8%	8.5%	8.7%
August	287	317	310	266	253	1,433
	8.4%	8.4%	8.4%	7.6%	8.1%	8.2%
September	339	319	320	291	248	1,517
	10.0%	8.4%	8.7%	8.4%	7.9%	8.7%
October	323	375	329	282	280	1,589
	9.5%	9.9%	8.9%	8.1%	8.9%	9.1%
November	281	301	285	245	232	1,344
	8.3%	8.0%	7.7%	7.0%	7.4%	7.7%
December	360	299	308	272	264	1,503
	10.6%	7.9%	8.4%	7.8%	8.4%	8.6%
Total	3,406	3,781	3,686	3,484	3,130	17,487
(Year %)	(19.5%)	(21.6%)	(21.1%)	(19.9%)	(17.9%)	100.0%

The data for fatal and serious injury crashes by month (see **Table 9**) shows an even flatter distribution than the overall crashes. Here, the high month was May and the low month was March.

Table 9: Fatal (K) and Serious Injury (A) Crashes by Month

	2005	2006	2007	2008	2009	Total
January	37 5.5%	54 8.0%	47 7.0%	48 7.2%	43 6.4%	229 7.9%
February	51 7.6%	43 6.6%	45 8.0%	41 8.3%	50 9.7%	230 7.9%
March	45 6.7%	52 8.0%	43 7.6%	49 9.9%	38 7.4%	227 7.8%
April	56 8.3%	55 8.4%	37 6.5%	57 11.5%	45 8.7%	250 8.6%
May	53 7.9%	68 10.4%	54 9.6%	37 7.5%	48 9.3%	260 9.0%
June	49 7.3%	57 8.7%	52 9.2%	49 9.9%	51 9.9%	258 8.9%
July	63 9.4%	58 8.9%	49 8.7%	36 7.3%	48 9.3%	254 8.8%
August	59 8.8%	49 7.5%	47 8.3%	43 8.7%	34 6.6%	232 8.0%
September	55 8.2%	59 9.0%	51 9.0%	33 6.7%	40 7.8%	238 8.2%
October	62 9.2%	68 10.4%	53 9.4%	33 6.7%	43 8.3%	259 8.9%
November	65 9.7%	49 7.5%	38 6.7%	40 8.1%	39 7.6%	231 8.0%
December	76 11.3%	41 6.3%	49 8.7%	30 6.0%	37 7.2%	233 8.0%
Total (Year %)	671 (23.1%)	653 (22.5%)	565 (19.5%)	496 (17.1%)	516 (17.8%)	2,901 100.0%

5.2 Day of Week

The distribution of crashes over the days of the week shows a drop in crashes for Friday and Saturday (**Figure 20**, **Table 10**). From 2005 through 2009, Thursday saw the most crashes of the week. This is a significant difference from the 2001-2005 study that found Friday to have the most pedestrian crashes.

Figure 20: Average Pedestrian Crashes by Day (2005-2009)

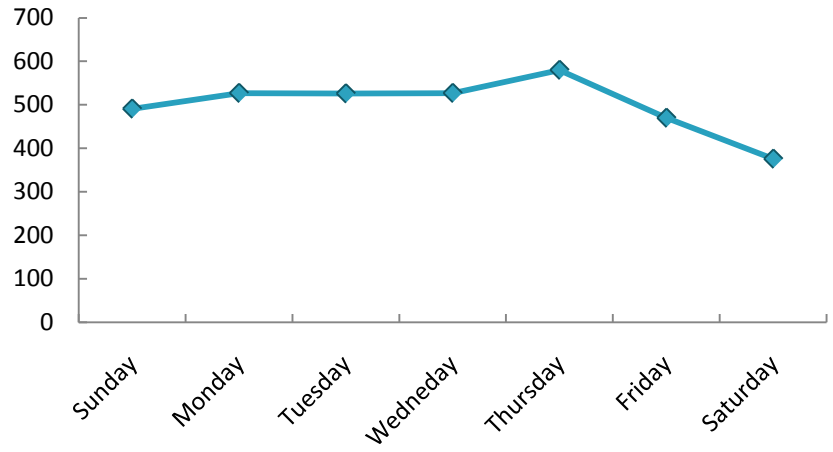
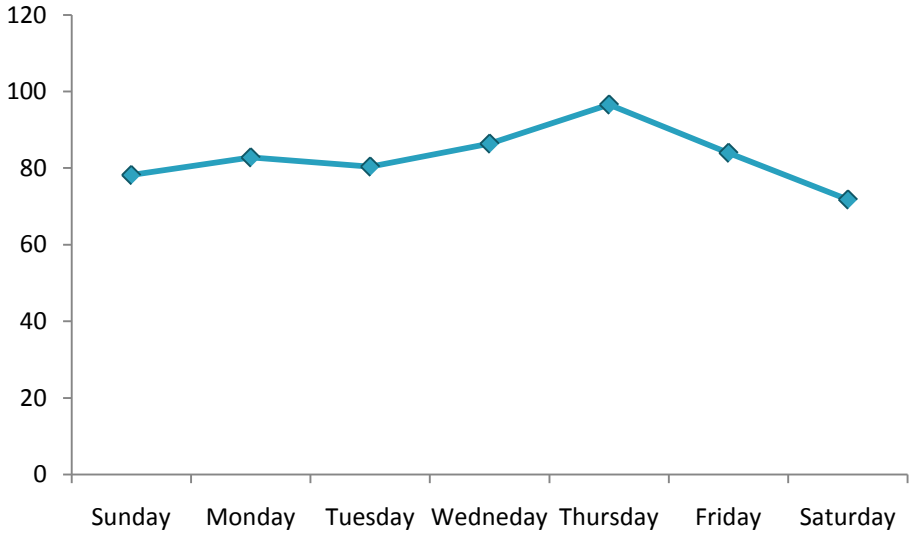


Table 10: Pedestrian Crashes by Day

	2005	2006	2007	2008	2009	Total
Sunday	504	570	502	476	403	2,455
	14.8%	15.1%	13.6%	13.7%	12.9%	14.0%
Monday	483	555	542	509	547	2,636
	14.2%	14.7%	14.7%	14.6%	17.5%	15.1%
Tuesday	487	556	598	546	444	2,631
	14.3%	14.7%	16.2%	15.7%	14.2%	15.0%
Wednesday	504	526	573	549	484	2,636
	14.8%	13.9%	15.5%	15.8%	15.5%	15.1%
Thursday	588	650	586	584	490	2,898
	17.3%	17.2%	15.9%	16.8%	15.7%	16.6%
Friday	468	507	493	466	415	2,349
	13.7%	13.4%	13.4%	13.4%	13.3%	13.4%
Saturday	372	417	392	354	347	1,882
	10.9%	11.0%	10.6%	10.2%	11.1%	10.8%
Total	3,406	3,781	3,686	3,484	3,130	17,487
(Year %)	(19.5%)	(21.6%)	(21.1%)	(19.9%)	(17.9%)	100.0%

The fatal and serious injury crash data also revealed a spike on Thursdays (see **Figure 21**), however, the decline on Fridays and Saturdays was less pronounced than it was for overall crashes. Friday accounted for 13% of the crashes and Saturday for 10%. This differs from national statistics, which show that 17% and 18% of pedestrian fatalities occur on Fridays and Saturdays, respectively.

Figure 21: Average Fatal and Serious Injury Pedestrian Crashes by Day (2005-2009)



5.3 Hour

Figure 22 shows total crashes plotted by time of day. The results closely match the results from the 2001-2005 Study. They also match the results from the NYC Study.

Figure 22: Average Pedestrian Crashes by Hour (2005-2009)

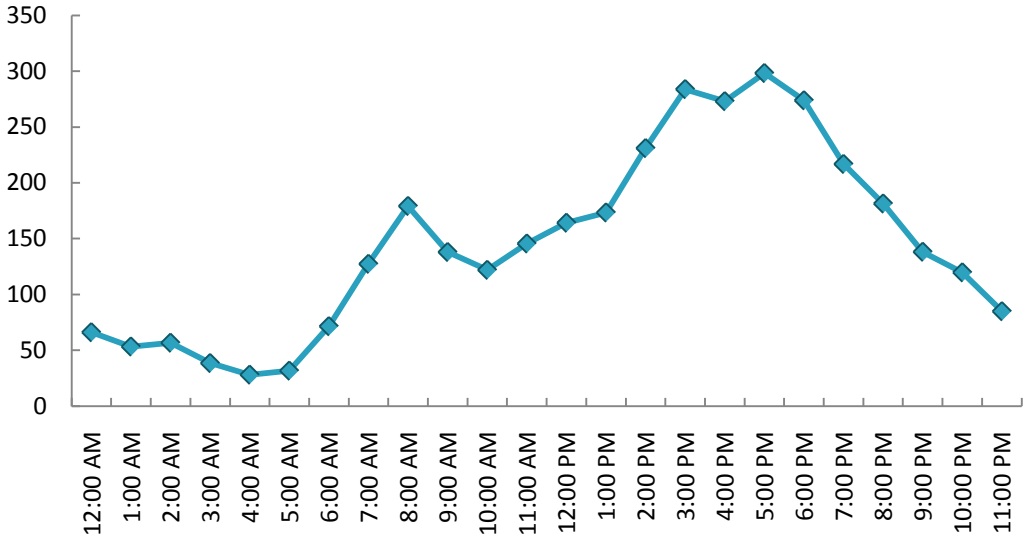
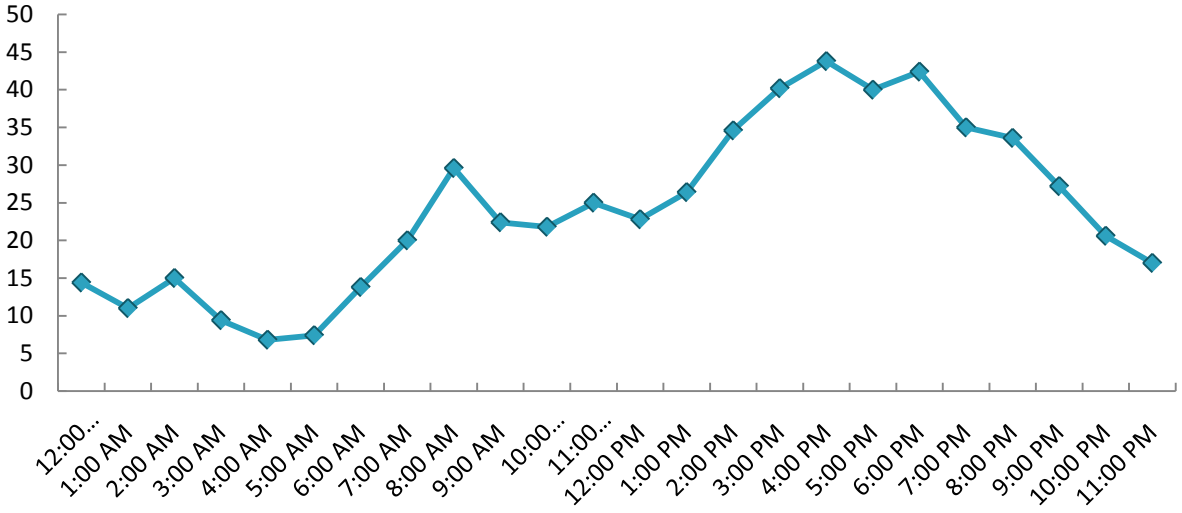


Figure 23 shows the fatal and serious injury crashes plotted by time of day. The patterns of fatal and serious injury crashes by hour were similar to those of all crashes.

Figure 23: Average Fatal and Serious Injury Pedestrian Crashes by Hour (2005-2009)



5.4 Time Periods

Figure 24 shows the pedestrian crash distribution across time periods for weekdays versus weekends as percentages of crashes during all time periods on those days. Both weekdays and weekends followed a similar pattern, with a peak during the 3:00 p.m. to 6:00 p.m. time period. Weekends experienced a larger percentage of crashes during the midnight to 3:00 a.m. time period than weekdays.

Figure 24: Average Weekday and Weekend Crashes (2005-2009) by Time Period

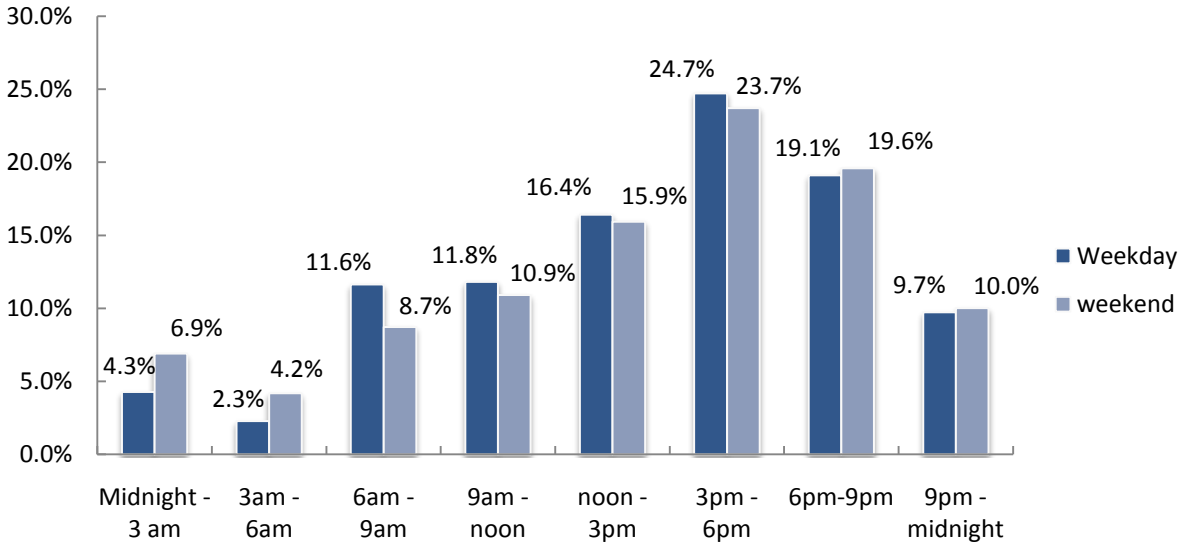


Figure 25 shows the proportion of fatal and serious injury crashes that occurred during daylight conditions versus nighttime. Nighttime crashes were considered those coded as “darkness” or “darkness, lighted road” for light condition. These data show that the proportion of nighttime crashes has decreased since 2005. They reached a low in 2008 at roughly 16% of the fatal and serious injury crashes. Crashes increased again in 2009, but remained well below the level in 2005.

Figure 25: Fatal and Serious Injury Pedestrian Crashes by Time of Day

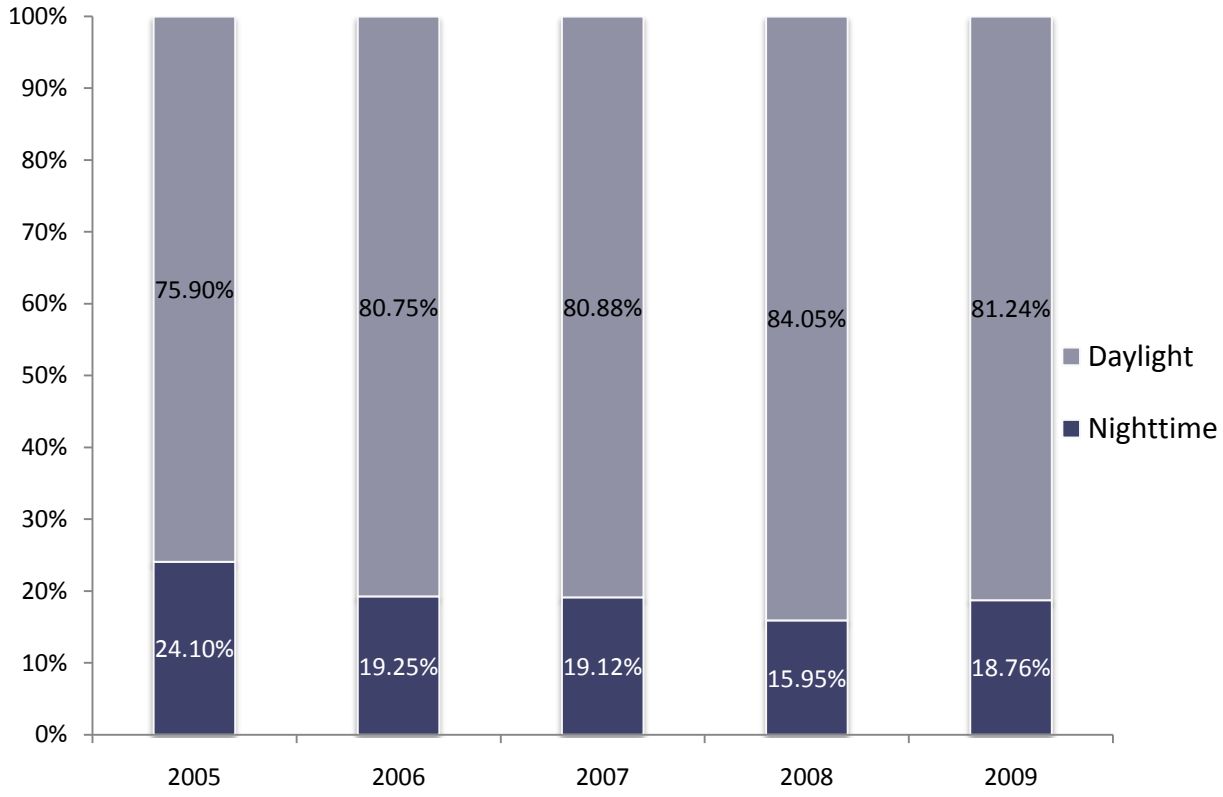


Table 11 shows the pedestrian crashes for each age group by the time of day. The 3:00 p.m. to 6:00 p.m. time period saw the largest share of crashes for every age group except seniors. However, almost 40% of the crashes among the 5-14 age group occurred during this time period, as compared to roughly 26% overall. These results are very similar to what was found in the 2001-2005 Study.

Seniors were more likely to be struck mid-day, between 9:00 a.m. and 3:00 p.m., than any other age group. This is likely due to higher rates of senior pedestrian activity during these times as compared to other age groups. Their crash involvement significantly dropped off in the nighttime and early morning hours.

On the other hand, ten percent of the crashes among 19-29 year olds occurred between midnight and 3:00 a.m. This was double the percentage of crashes for all age groups combined during this time period.

Table 11: Pedestrian Crashes (2005-2009) by Age Group and Time of Day

	0-4	5-14	15-18	19-29	30-59	60-64	65+	Unknown	Overall
	4	26	67	329	367	11	19	58	881
12am-3am	1.1%	1.0%	5.0%	10.1%	5.8%	2.1%	1.6%	5.2%	5.2%
	0	9	20	184	239	10	10	21	493
3am-6am	0.0%	0.3%	1.5%	5.6%	3.8%	1.9%	0.8%	1.9%	2.9%
	13	279	201	325	771	71	127	104	1,891
6am-9am	3.4%	10.3%	14.9%	10.0%	12.1%	13.6%	10.6%	9.4%	11.2%
	34	140	103	372	902	94	274	109	2,028
9am-12pm	9.0%	5.2%	7.6%	11.4%	14.2%	18.0%	22.9%	9.9%	12.0%
	69	391	193	487	1,125	89	304	183	2,841
12pm-3pm	18.3%	14.4%	14.3%	14.9%	17.7%	17.1%	25.4%	16.6%	16.8%
	118	1,069	392	677	1,356	135	263	364	4,374
3pm-6pm	31.3%	39.4%	29.0%	20.7%	21.3%	25.9%	22.0%	32.9%	25.9%
	127	730	287	613	1,152	87	166	197	3,359
6pm-9pm	33.7%	26.9%	21.2%	18.8%	18.1%	16.7%	13.9%	17.8%	19.9%
	12	70	90	277	447	24	35	69	1,024
9pm-12am	3.2%	2.6%	6.7%	8.5%	7.0%	4.6%	2.9%	6.2%	6.1%
Total	377	2,714	1,353	3,264	6,359	521	1,198	1,105	16,891

6 GEOGRAPHIC

Geographic analyses visually display where the crashes occurred. These analyses were conducted on several levels: aldermanic wards, CCAs, corridors, intersections, transit stations, schools and senior resource locations. This section also examines pedestrian exposure in an attempt to identify CCAs, Loop corridors and CTA transit stations where a disproportionate number of pedestrian crashes occurred.

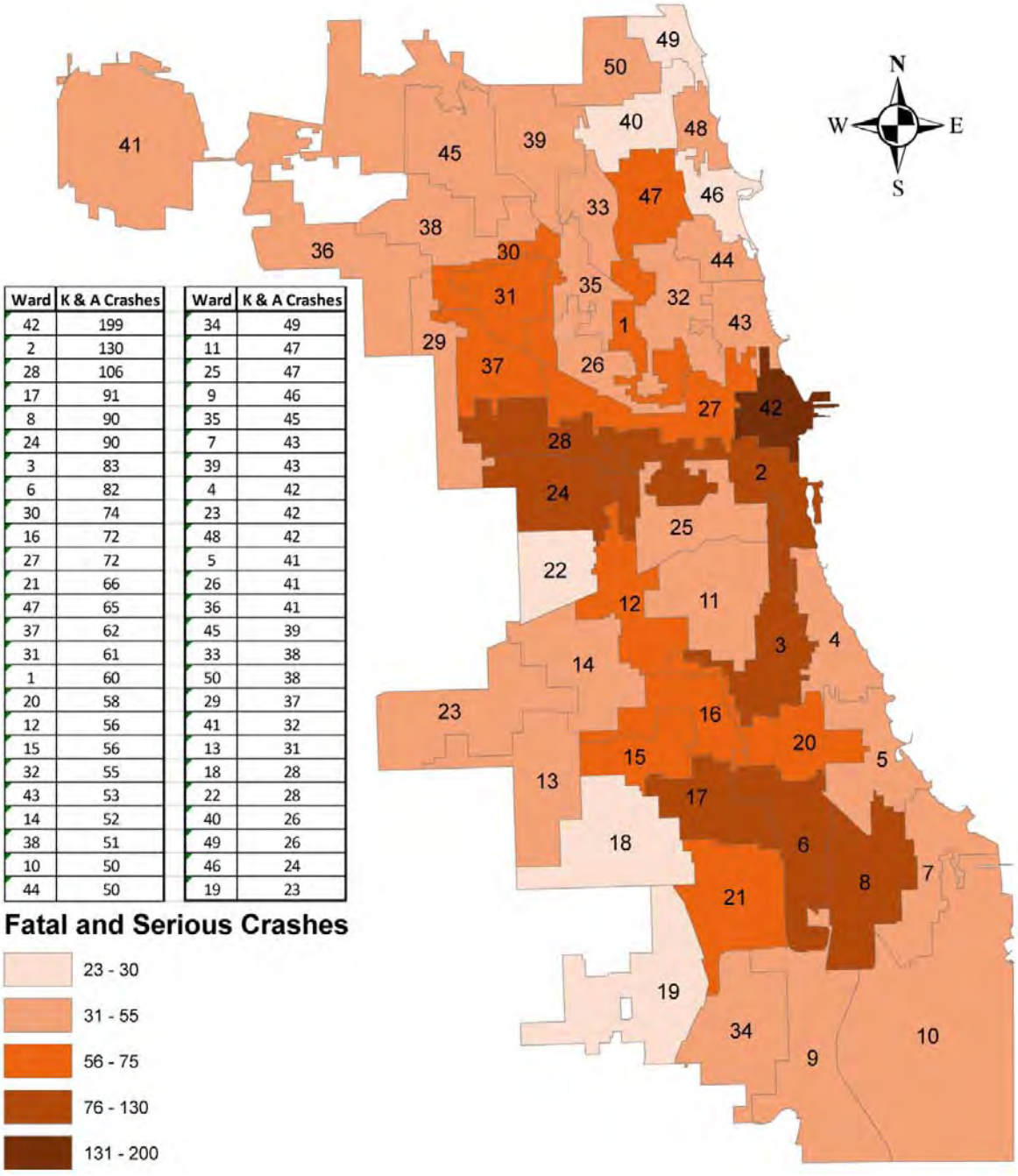
6.1 Wards

Chicago's political system is made up of fifty aldermanic wards. Fatal and serious injury pedestrian crashes were tallied and compared for all wards.

Map 1 on the following page shows the frequency of fatal and serious injury pedestrian crashes by ward. The 42nd Ward had the highest number over the five-year period with 199. The 2001-2005 Study of pedestrian crashes looked at all crashes by ward for the years 2003 and 2005. The results of that study also showed the 42nd Ward as having the highest number of crashes.

The 42nd Ward includes portions of the Loop and Near North Side community areas, which have high levels of pedestrian activity compared to other neighborhoods. Thus, it is not surprising that it also had the highest number of crashes. This analysis only reveals the total number of crashes and does not account for pedestrian exposure. Pedestrian exposure is discussed in **Section 6.3**.

Map 1: Fatal (K) and Serious Injury (A) Pedestrian Crashes (2005-2009) by Ward



Ward	K & A Crashes
42	199
2	130
28	106
17	91
8	90
24	90
3	83
6	82
30	74
16	72
27	72
21	66
47	65
37	62
31	61
1	60
20	58
12	56
15	56
32	55
43	53
14	52
38	51
10	50
44	50

Ward	K & A Crashes
34	49
11	47
25	47
9	46
35	45
7	43
39	43
4	42
23	42
48	42
5	41
26	41
36	41
45	39
33	38
50	38
29	37
41	32
13	31
18	28
22	28
40	26
49	26
46	24
19	23

6.2 Chicago Community Areas

Further analyses of the pedestrian crashes at the neighborhood level were conducted by CCAs in lieu of wards for several reasons. The CCAs divide the city into 77 areas that have remained constant since 1980, which are tied to commonly referenced neighborhoods.[9] The CCA boundaries are more consistent over time while ward boundaries are redrawn after each US Decennial Census. In addition, the CCA boundaries have been adopted by the US Census, which enables analysis using a variety of demographic data such as population, race, and income. The same level of detail is not available by ward.

The level of pedestrian crashes occurring in each CCA was considered in several different ways. First, the total number of pedestrian crashes and the total number of fatal and serious injury pedestrian crashes were considered for each CCA. **Table 12** lists the top ten CCAs with the most pedestrian crashes over the 2005-2009 time period.

Table 12: CCAs with the Most Pedestrians Crashes

Community Area		Total Crashes	Total K&A Crashes
8	Near North Side	1,071	138
32	Loop	924	118
25	Austin	903	130
28	Near West Side	633	93
24	West Town	497	81
6	Lake View	448	67
22	Logan Square	435	67
19	Belmont Cragin	421	81
66	Chicago Lawn	410	55
71	Auburn Gresham	407	73
23	Humboldt Park	398	71
68	Englewood	384	70

The CCAs with the most pedestrian crashes and the most fatal and serious injury crashes are concentrated in central Chicago with two, Chicago Lawn and Auburn Gresham on the southwest side. In fact, the CCAs with the most fatal and serious injury crashes form an east-west band across central Chicago from the Loop and Near North Side on the east to Austin on the west, with the exception of Auburn Gresham.

[9] *Encyclopedia of Chicago* http://encyclopedia.chicagohistory.org/pages/319.html. Accessed April 25, 2011.

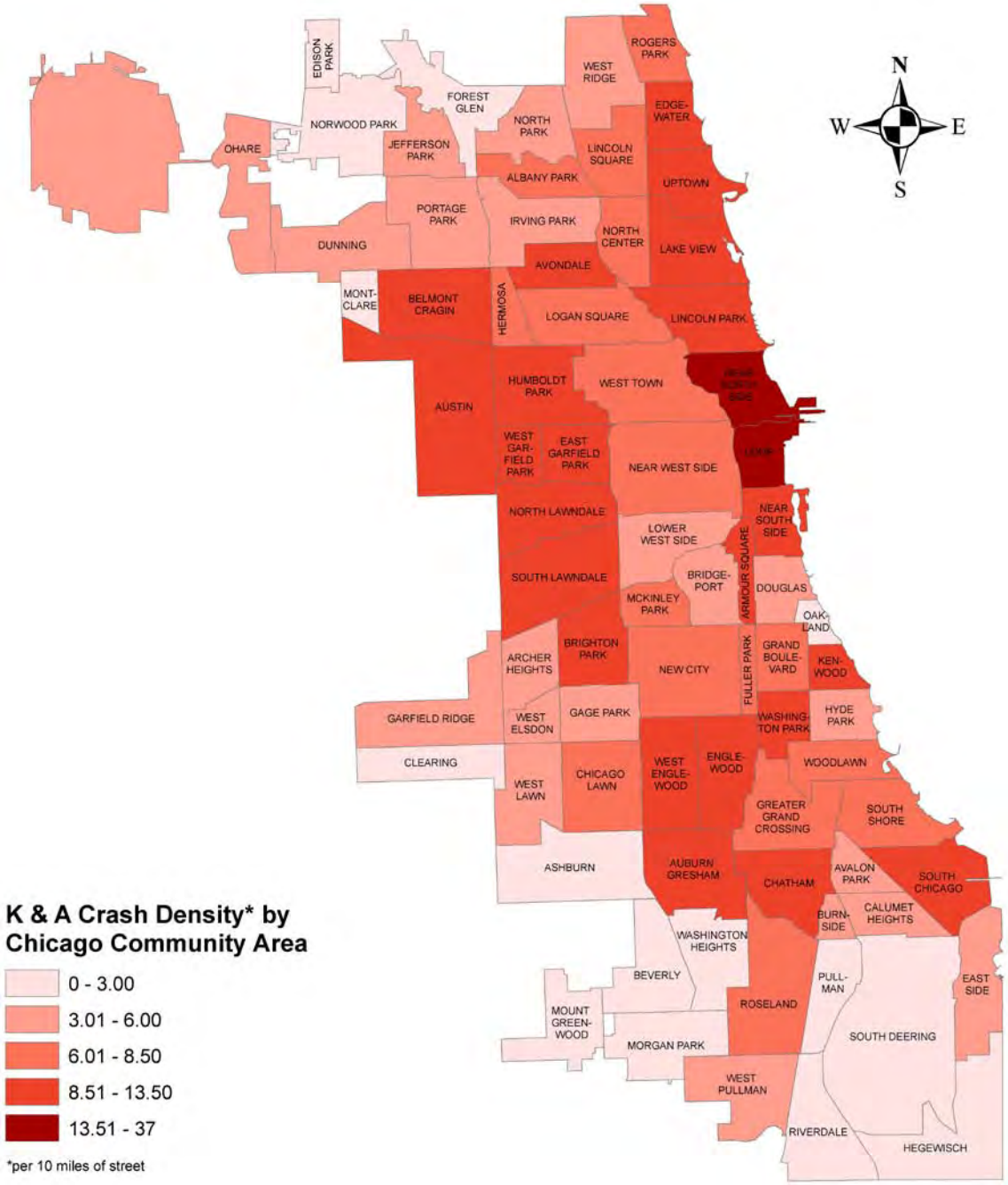
The rates of fatal and serious injury crashes to all crashes also were considered by CCA. **Table 13** lists the CCAs where fatal and serious injury crashes comprised over 25% of all pedestrian crashes. The percentage citywide was 16.3%.

Table 13: Top Fatal and Serious Injury Crash Rates (2005-2009) by CCA

Community Area		Total Crashes	K&A Crashes	K&A/Total Crashes
17	Dunning	139	40	28.8%
52	East Side	73	21	28.8%
46	South Chicago	193	53	27.5%
37	Fuller Park	35	9	25.7%
9	Edison Park	20	5	25.0%
11	Jefferson Park	80	20	25.0%
47	Burnside	16	4	25.0%

The number of crashes in each CCA was also compared to the total length of street, in miles. This was done in order to account for the varying sizes of the CCAs. **Map 2** shows the fatal and serious injury pedestrian crashes normalized by the total length of street. In this analysis, the Loop and Near North Side community areas rise to the top of the list, similar to the crash analysis by ward.

Map 2: Fatal (K) and Serious Injury (A) Crashes (2005-2009) per 10 Miles of Street



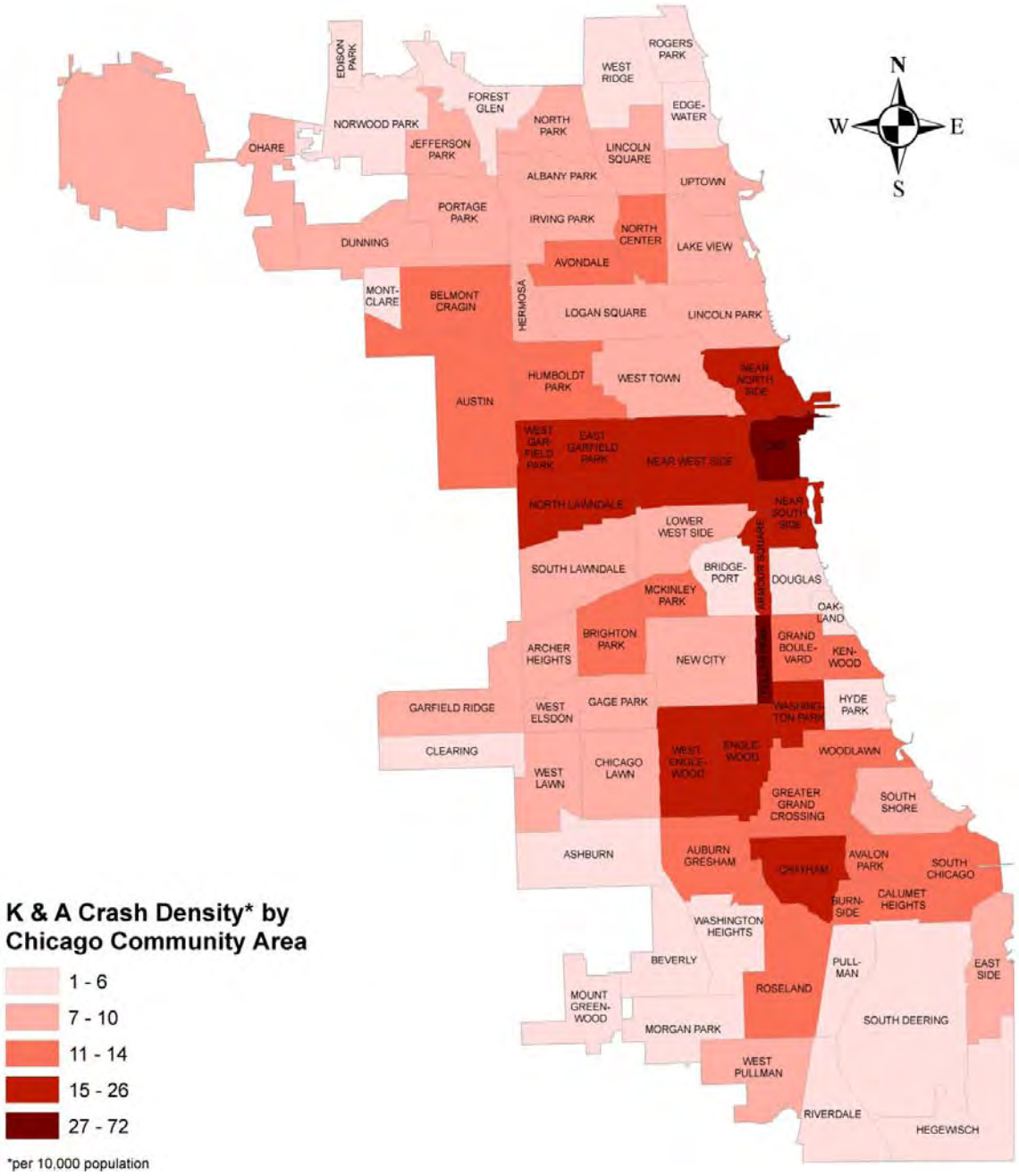
6.3 Pedestrian Exposure

Citywide data on pedestrian levels of activity do not exist. To account for pedestrian exposure and identify geographic areas where a disproportionate number of crashes occurred, several surrogate means of quantifying pedestrian exposure were used. The numbers of crashes were then compared to pedestrian exposure by CCA. Surrogate exposure measures included:

- Residents (**Map 3**)
- CTA Bus Boardings and Alightings (**Map 4**)
- Population Walking or Taking Transit to Work (**Map 5**)

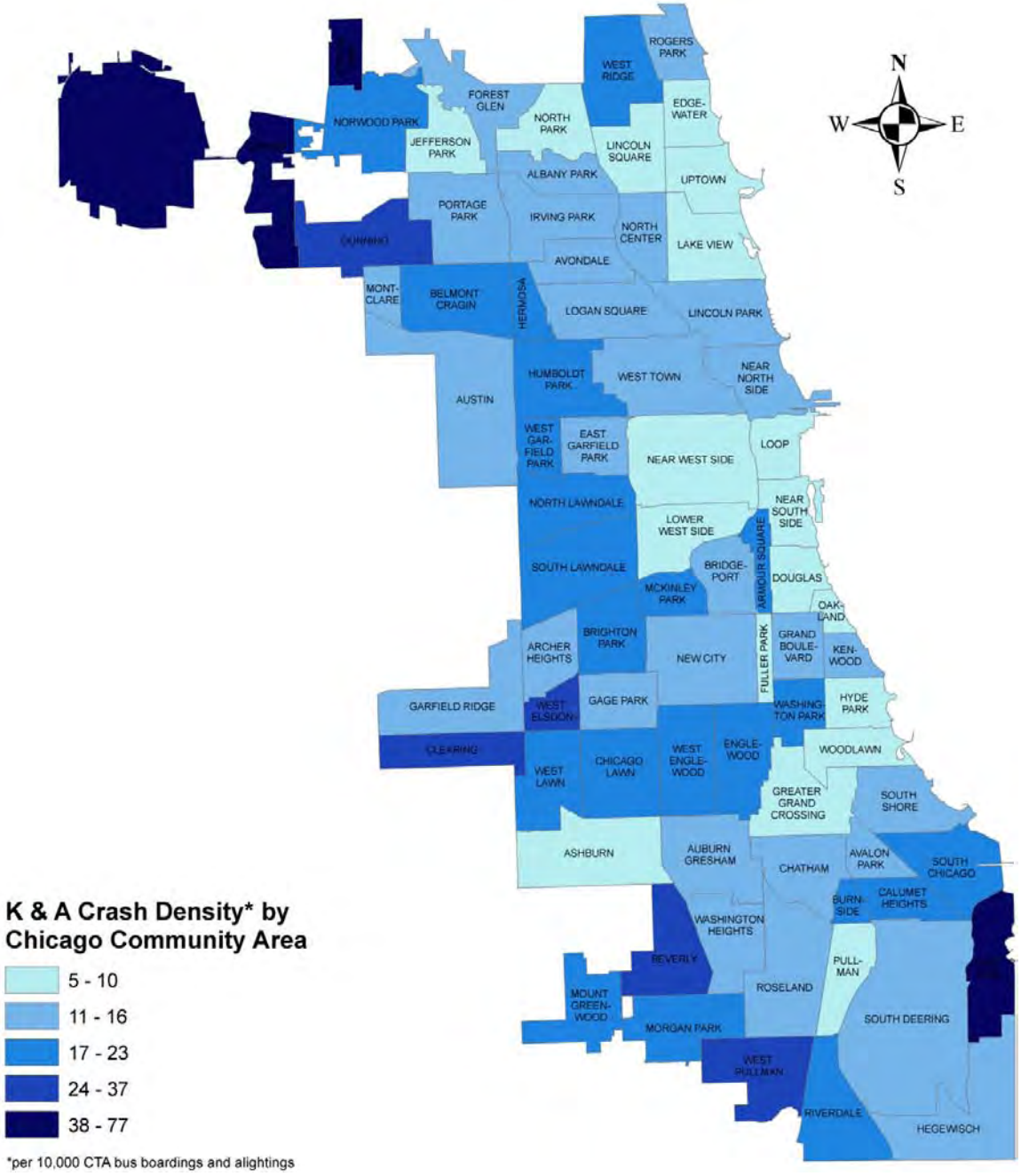
An area resulting in a high density of crashes means that there were a high number of crashes occurring there in relationship to the level of exposure. Fatal and serious injury pedestrian crashes were used for these analyses.

Map 3: Fatal (K) and Serious Injury (A) Pedestrian Crashes (2005-2009) per 10,000 Population (2000)

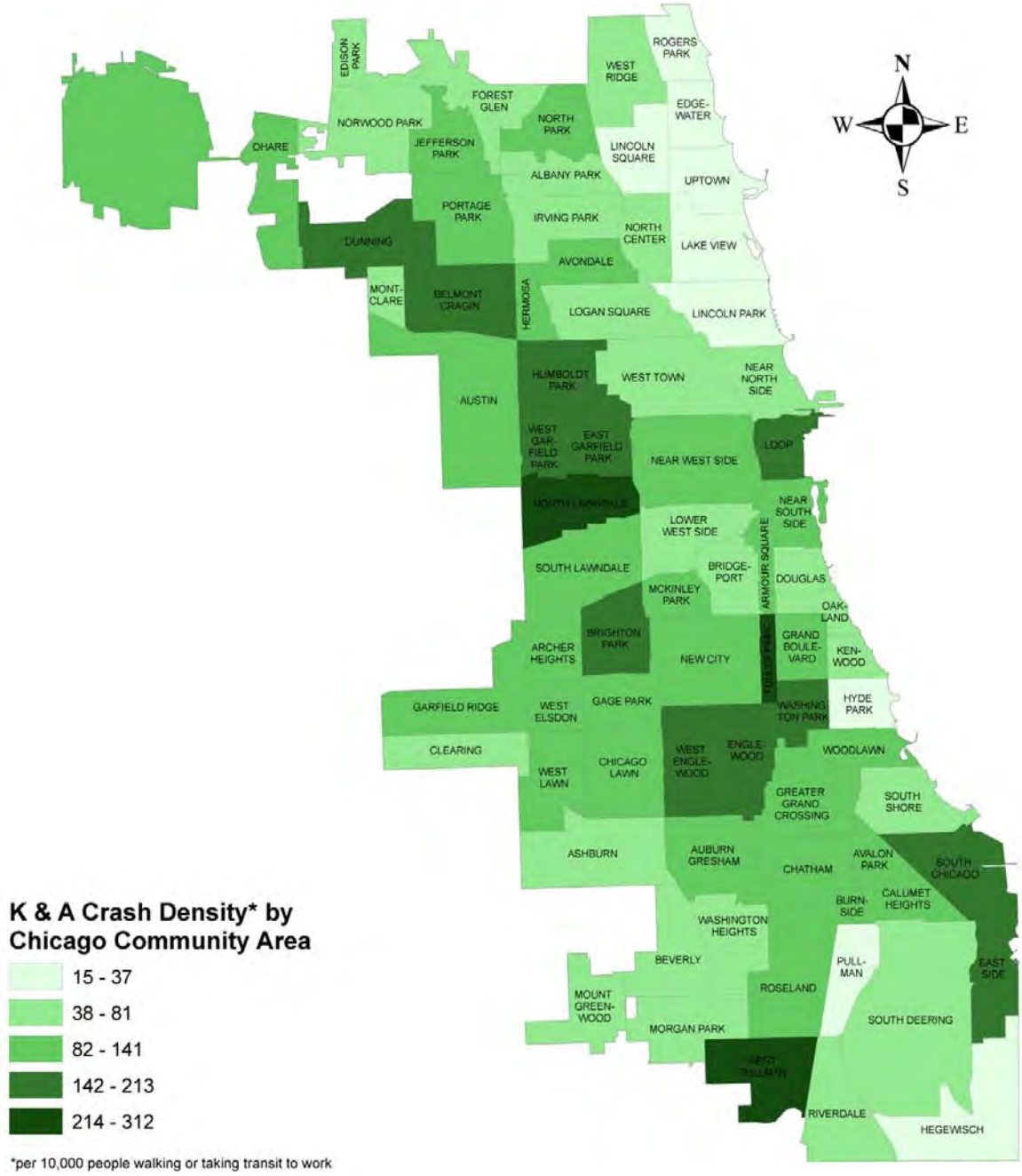


Map 4 displays the crash density of fatal and serious injury crashes based on the bus boarding and alighting totals.

Map 4: Fatal (K) and Serious Injury (A) Pedestrian Crashes (2005-2009) per 10,000 CTA Bus Boardings and Alightings (Avg. Weekday 2008)



Map 5: Fatal (K) and Serious Injury (A) Crashes (2005-2009) per Population Walking or Taking Transit to Work (2005-2009)



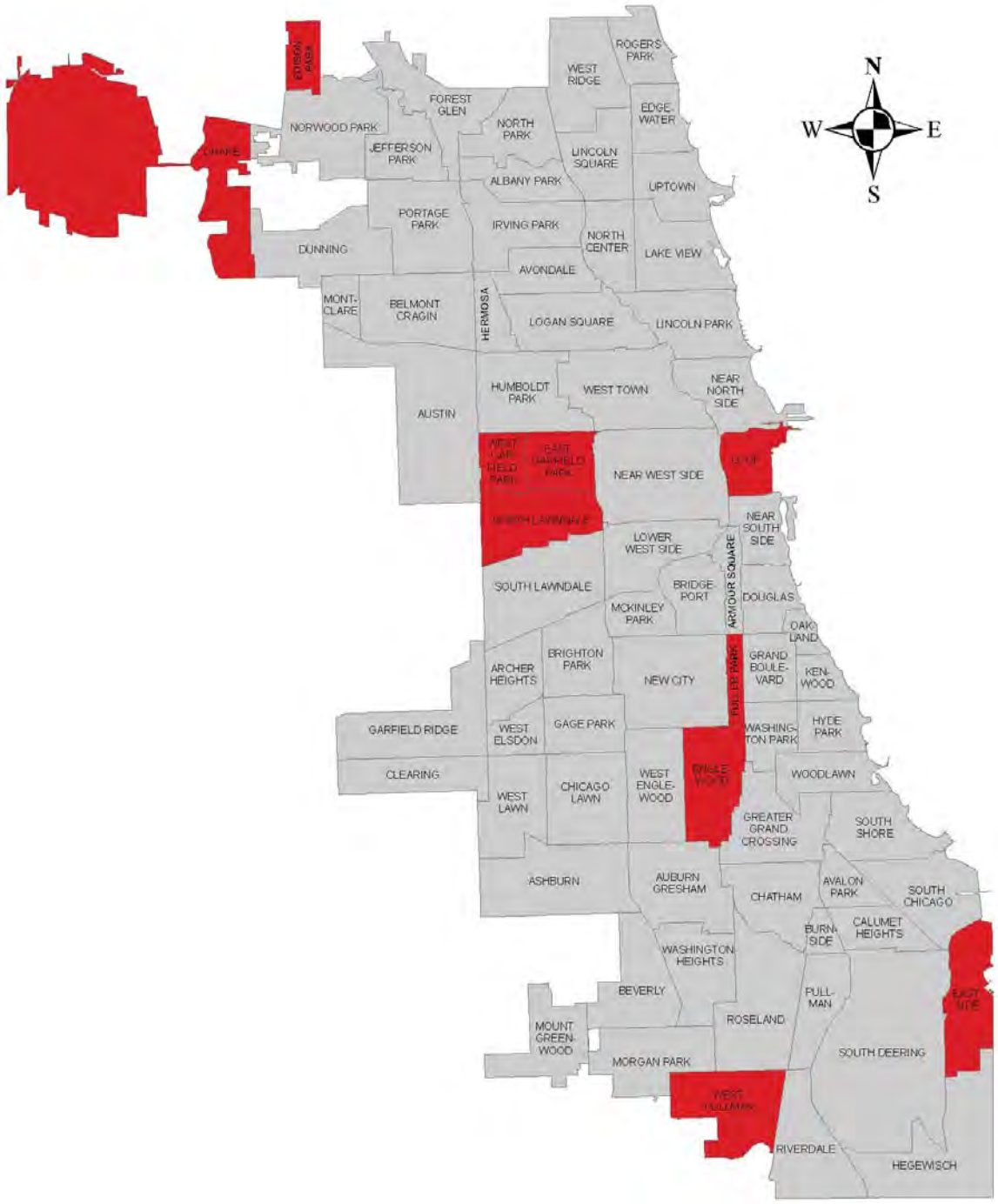
The results from these analyses were combined to identify CCAs with a relatively high density of crashes. Each CCA was assigned a relative ranking for each exposure measure by dividing the crash density value of that CCA by the highest value in that category. The three relative rankings

were then added and ranked to obtain the top ten rankings. These results are listed in **Table 14** and displayed in **Map 6** on the following page.

Table 14: CCA Rankings of Fatal (K) and Serious Injury (A) Crashes (2005-2009) by Pedestrian Exposure

			Relative Rankings						
Community Area		Total K&A Crashes	Population		Bus Ridership		Journey to Work		Sum of Exposure Rankings
52	East Side	21	8.9	0.12	77	1.00	194	0.62	1.7
32	Loop	118	72.0	1.00	8	0.10	185	0.59	1.7
53	West Pullman	29	7.9	0.11	29	0.38	312	1.00	1.5
76	O'Hare	12	10.0	0.14	71	0.92	108	0.35	1.4
37	Fuller Park	9	26.3	0.37	8	0.10	269	0.86	1.3
29	North Lawndale	67	16.0	0.22	23	0.30	235	0.75	1.3
27	East Garfield Park	40	19.2	0.27	16	0.21	213	0.68	1.2
26	West Garfield Park	40	17.4	0.24	20	0.26	198	0.63	1.1
68	Englewood	70	17.4	0.24	19	0.25	193	0.62	1.1
9	Edison Park	5	4.4	0.06	64	0.83	64	0.21	1.1

Map 6: Top Ten CCAs for Fatal (K) and Serious Injury (A) Crashes (2005-2009) by Pedestrian Exposure



6.4 Motorist and Pedestrian Residence

Data locating the residence of motorists and pedestrians involved in pedestrian crashes between 2005 and 2009 was provided by CDOT. The ten community areas where the most motorists lived were as follows:

1. Austin
2. Chicago Lawn
3. South Shore
4. Auburn Gresham
5. Belmont Cragin
6. West Englewood
7. Humboldt Park
8. West Town
9. West Ridge
10. Logan Square

The top ten CCAs of pedestrian residence was a similar list with only two community areas being different. Near North Side and Lake View were included among the top ten CCAs for pedestrian residence whereas South Shore and West Ridge were not.

Several of these CCAs mimic those with the most overall as well as fatal and serious injury crashes, as listed in **Table 12** above.

6.5 Corridors

For this study, a high crash corridor was defined as a continuous roadway, between one and two miles in length, containing a high crash density or two or more high crash intersections. Due to the varying environment of Chicago's roadways and neighborhoods, a maximum length of two miles was used in an attempt to ensure the corridors maintained similar roadway and land use characteristics throughout. Kernel density and intersection crash maps were compared to identify the high crash corridors.

The kernel density is developed by dividing the crash density in the vicinity of each individual crash point, defined by a specified search radius, by the density of the entire study area. This results in areas of high crash densities being highlighted, making it visually apparent where the crashes are concentrated. These maps were created using a search radius of ½-mile around each crash. Locations with a higher crash density are displayed in red, while locations with the lowest crash density are displayed in dark blue.

The kernel density map for fatal and serious injury crashes (**Map 7**) was the primary map used for this analysis, as it produced the most defined corridors. Kernel density maps displaying all pedestrian crashes and fatal pedestrian crashes only were also compared to this map to ensure all high crash corridors were included. Proximate intersections with high crashes also were considered in the determination of high crash corridors.

Twelve high crash corridors were identified using this methodology. Together, these corridors account for 6.7% of all fatal and serious injury crashes during the five-year period.

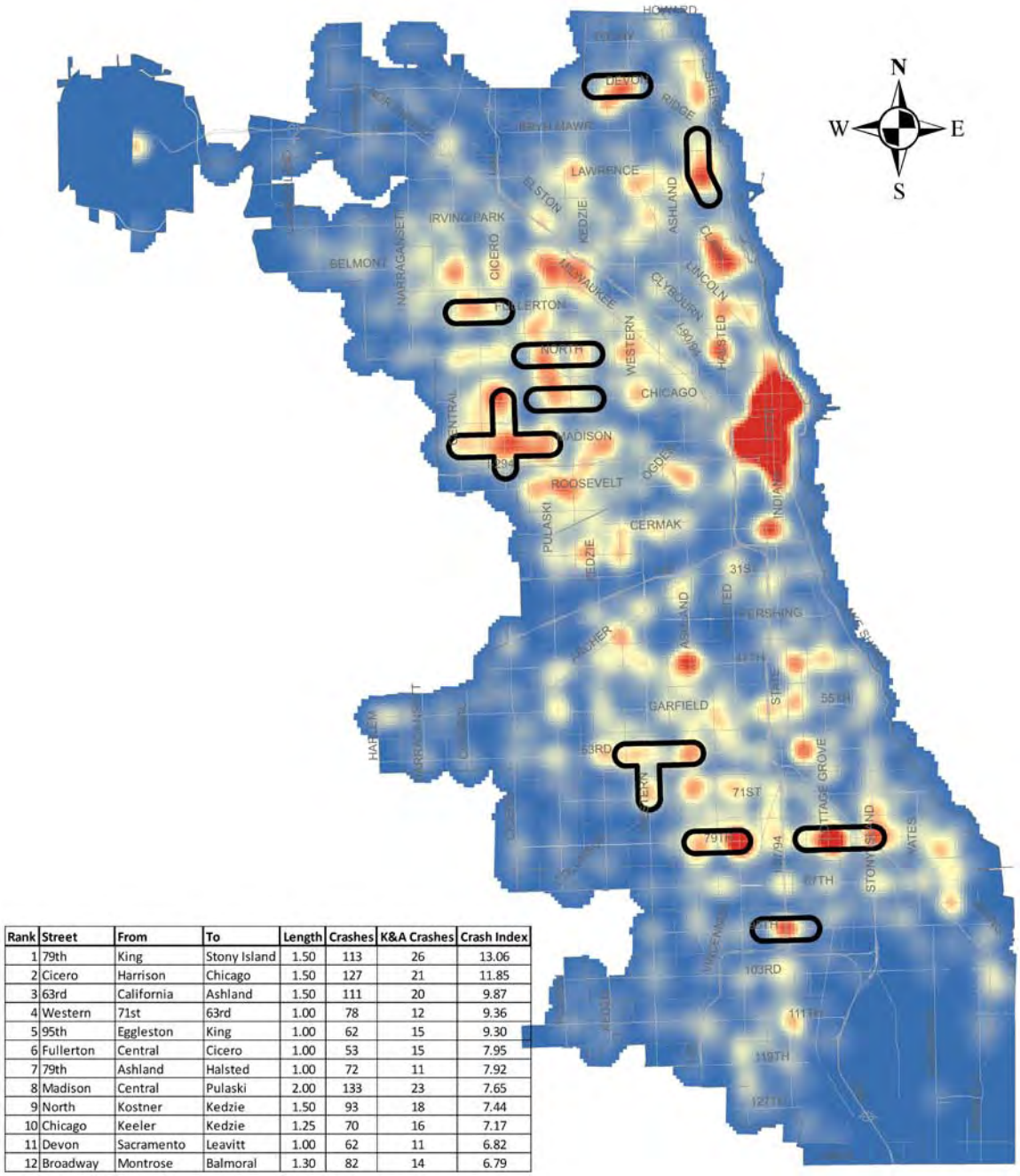
The corridors were ranked using a weighted crash index by mile (**Table 15**.) The total pedestrian crashes per mile were multiplied by the fatal and serious injury pedestrian crashes per mile. The product was then divided by 100 to yield a crash index. The index is thus weighted to give a higher prominence to the fatal and serious injury crashes.

Table 15: High Crash Corridor Rankings (2005-2009)

Rank	Street	From	To	Crash Index
1	79th	King	Stony Island	13.06
2	Cicero	Harrison	Chicago	11.85
3	63rd	California	Ashland	9.87
4	Western	71st	63rd	9.36
5	95th	Eggleston	King	9.30
6	Fullerton	Central	Cicero	7.95
7	79th	Ashland	Halsted	7.92
8	Madison	Central	Pulaski	7.65
9	North	Kostner	Kedzie	7.44
10	Chicago	Keeler	Kedzie	7.17
11	Devon	Sacramento	Leavitt	6.82
12	Broadway	Montrose	Balmoral	6.79

Although the Loop community area had the highest crash density and multiple high crash intersections, it was not included in the high crash corridors. Given the large number, the Loop crashes were analyzed separately in **Section 6.6**.

Map 7: Fatal (K) and Serious Injury (A) Pedestrian Crash Kernel Density and High Crash Corridors (2005-2009)



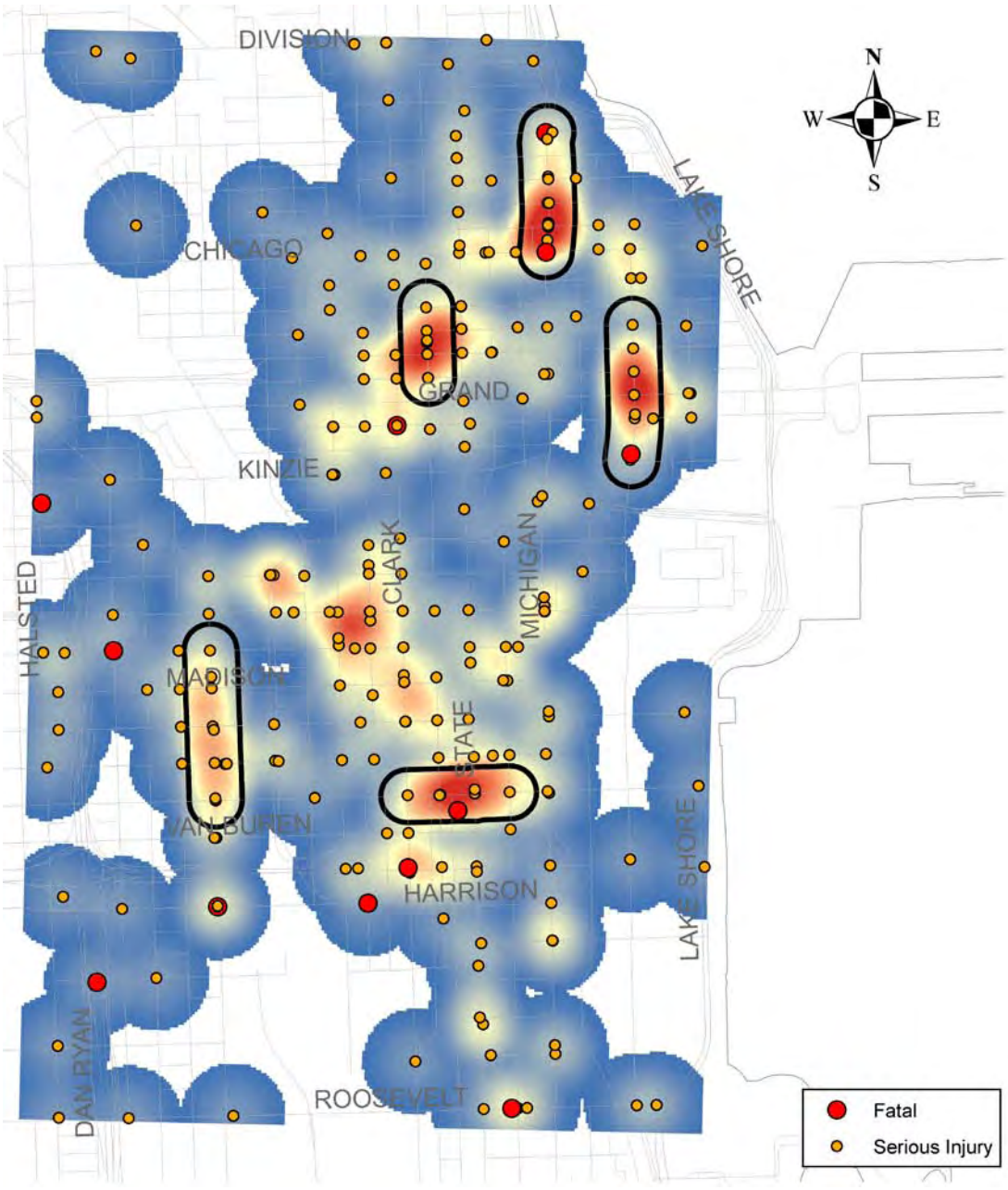
Rank	Street	From	To	Length	Crashes	K&A Crashes	Crash Index
1	79th	King	Stony Island	1.50	113	26	13.06
2	Cicero	Harrison	Chicago	1.50	127	21	11.85
3	63rd	California	Ashland	1.50	111	20	9.87
4	Western	71st	63rd	1.00	78	12	9.36
5	95th	Eggleston	King	1.00	62	15	9.30
6	Fullerton	Central	Cicero	1.00	53	15	7.95
7	79th	Ashland	Halsted	1.00	72	11	7.92
8	Madison	Central	Pulaski	2.00	133	23	7.65
9	North	Kostner	Kedzie	1.50	93	18	7.44
10	Chicago	Keeler	Kedzie	1.25	70	16	7.17
11	Devon	Sacramento	Leavitt	1.00	62	11	6.82
12	Broadway	Montrose	Balmoral	1.30	82	14	6.79

6.6 Central Business District Corridors

The kernel density analysis described above revealed the entire Loop and Near North community areas as high density crash areas. Therefore, a second kernel density analysis was conducted of the CBD, bounded roughly by Division Street on the north, Roosevelt Road on the south,

Halsted Street on the west, and Lake Michigan on the east. These limits were selected in lieu of the CCA boundaries in order to focus on the core downtown area. This analysis used a search radius of 1/16-mile. The results are displayed in **Map 8.**

Map 8: Fatal (K) and Serious Injury (A) Pedestrian Crashes Kernel Density (2005-2009) in the Central Business District



Five high crash corridors were identified within the CBD. These corridors account for 19.5% of all fatal and serious injury crashes within the CBD during the five-year study period.

The corridors were ranked using the same weighted crash density by mile as was used in the citywide corridor analysis. **Table 16** shows these rankings.

Table 16: CBD High Crash Corridor Rankings (2005-2009)

Rank	Street	From	To	Crash Index
1	Dearborn	Ohio	Huron	166.37
2	Jackson	Clark	Wabash	136.50
3	Michigan	Chicago	Oak	134.60
4	Columbus/Fairbanks	Water	Ontario	129.58
5	Canal	Jackson	Washington	57.44

Pedestrian counts were available for this area from 2007. The crashes in these corridors were compared to the average number of pedestrians on one side of one block within the corridor. The results of the rankings and comparisons are included in **Table 17**.

Table 17: Top Corridors within the Central Business District (2005-2009)

Rank	Street	From	To	Crash Index	Crashes/10,000 Peds
1	Dearborn	Ohio	Huron	166.37	246.81
2	Columbus/Fairbanks	Water	Ontario	129.58	152.94
3	Michigan	Chicago	Oak	134.60	52.78
4	Jackson	Clark	Wabash	136.50	46.15
5	Canal	Jackson	Washington	57.44	43.75

When considering pedestrian exposure, the Columbus/Fairbanks corridor moved up to the second ranked corridor and the Jackson corridor moved to number four.

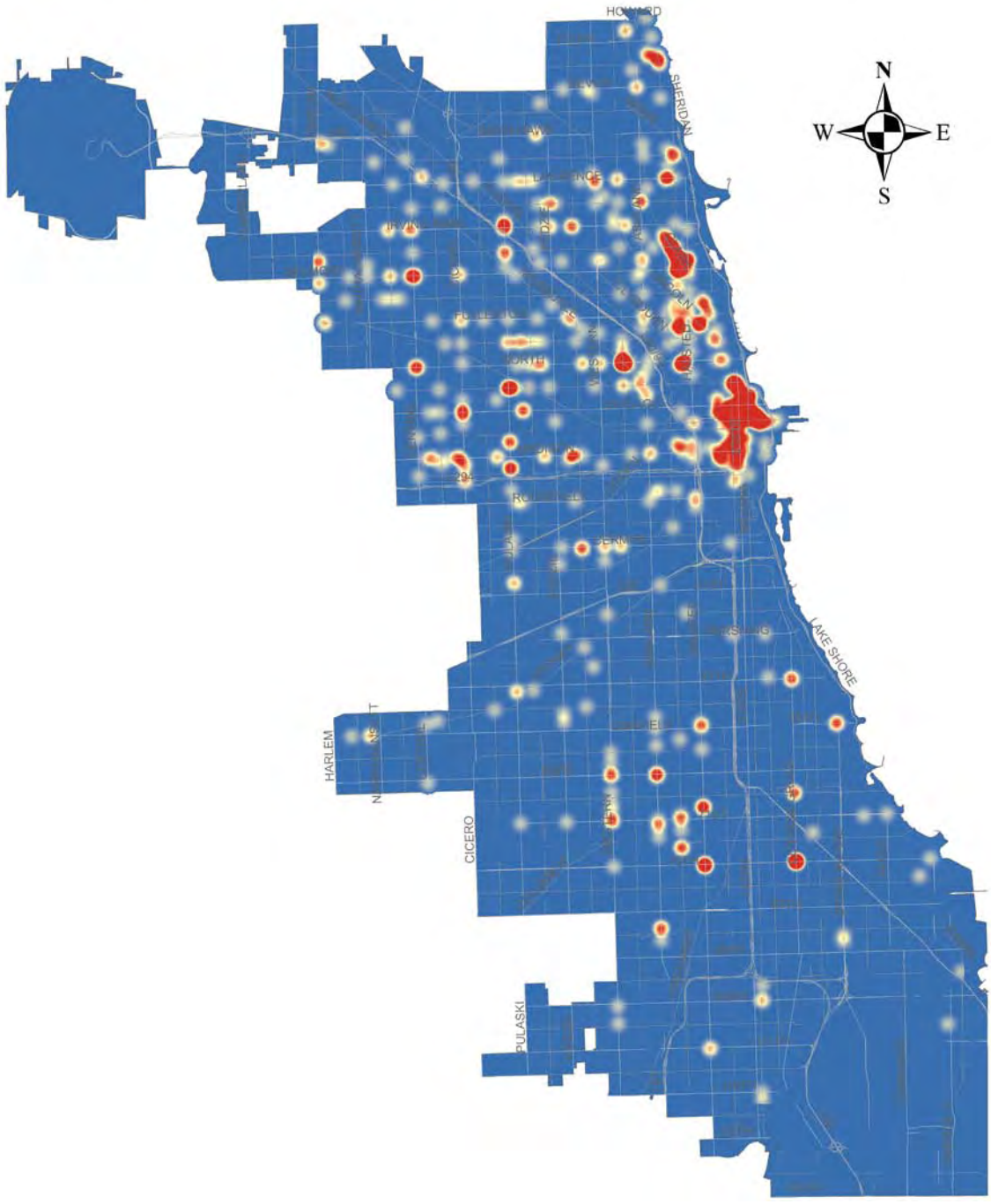
6.7 Nightlife and Nighttime Crashes

Additional kernel density maps were created to identify locations of high concentrations of nighttime crashes that occurred near businesses with liquor licenses.

The pedestrian crash data did not include reliable data on whether the driver or the pedestrian had been drinking. It is possible that the high level of hit and run crashes is a limiting factor in reporting the motorist's alcohol involvement. Meanwhile, obtaining this data for pedestrians is difficult as it is not an infraction of the law for a pedestrian to be intoxicated.

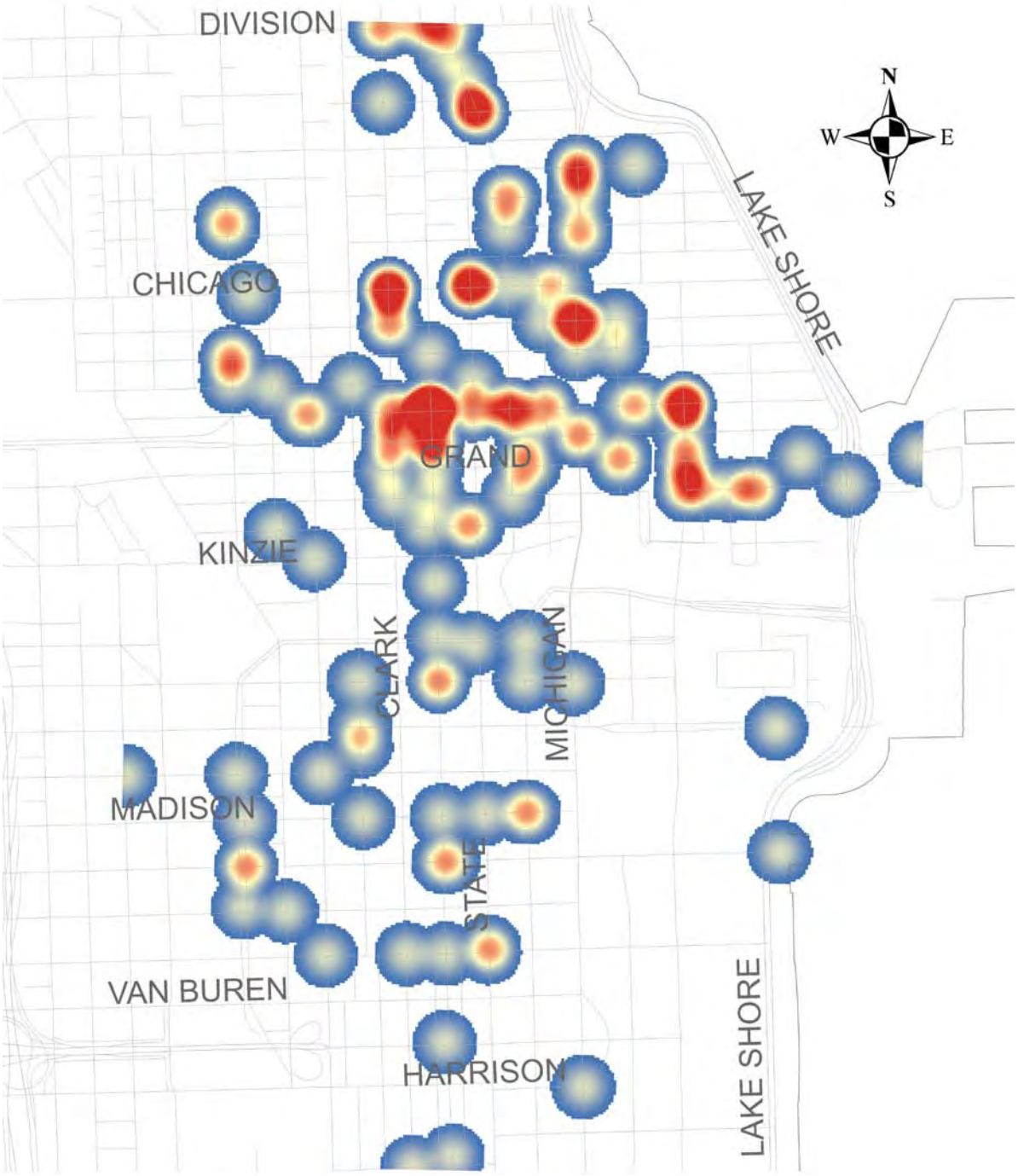
In lieu of this, pedestrian crashes that occurred between 9:00 p.m. and 3:00 a.m. and in the vicinity of a business with a liquor license were mapped to determine if there were any concentrations of these types of crashes. **Map 9** on the next page shows a kernel density of these crashes citywide using a ¼-mile search radius and **Map 10**, following, shows a second analysis of the CBD, which showed up as a hot spot in the first map, using a search radius of 1/16 of a mile.

Map 9: Kernel Density of Nighttime Crashes (9:00 p.m. – 3:00 a.m.) Near Businesses with Liquor Licenses (2005-2009)



Several locations stand out on these maps. The corridors along Clark Street from Belmont Avenue to Grace Street and two corridors along Halsted Street and Lincoln Avenue, just south of where they intersect. Several intersections also showed up as hot spots for these crashes, including the Damen Avenue/Milwaukee Avenue/North Avenue intersection, 79th Street and Halsted Street, 79th Street and Cottage Grove Avenue, and 69th Street and Halsted Street.

Map 10: Kernel Density of Nighttime Crashes (9:00 p.m. – 3:00 a.m.) Near Businesses with Liquor Licenses in CBD (2005-2009)



Focusing in on the area that showed up as one entire hot spot in the previous analysis, the kernel density analysis shows some additional localized high crash areas. Notable are two corridors along Ontario Street between Clark Street and Rush Street and along Columbus Drive/Fairbanks Court between Ontario Street and Illinois Street. In addition, there are several hot spots at intersections scattered throughout this area.

6.8 Intersections

The IDOT crash data include a code for intersection-related crashes. According to the *Illinois Traffic Safety Report SR 1050,* a crash does not have to actually occur at the intersection to be intersection-related. For example, if a crash occurs due to vehicles queuing at a traffic signal, that crash would be considered intersection-related. This coding relies on the officer in the field to use his/her judgment and record the crash accurately. If the officer leaves that portion of the crash report incomplete, the crash is considered not intersection-related. This can result in incorrectly reported data.

In order to ensure that all crashes at intersections were captured, intersection-related crashes for this analysis were defined spatially instead of using the intersection code. Intersection-related crashes were defined as those occurring within 125 feet from the midpoint of the intersection. This distance was chosen to represent the majority of Chicago intersections. The consequence of using a shorter distance is that it would exclude crashes at the larger intersections, which tend to be the most intimidating to pedestrians. On the other hand, using a distance much larger than 125 feet would capture mid-block crashes on the shorter blocks, which are prevalent in the Loop.

Based on this definition, 77.7% of all crashes and 79.7% of fatal and serious injury crashes were intersection-related. (See **Table 18** on the following page.) Crashes that were coded as intersection-related by IDOT accounted for 53.5% of all pedestrian crashes.

The 2001-2005 Study employed a similar method to define intersection-related crashes, but used a buffer distance of 50 feet. That study found that only 43.5% of the crashes were intersection-related.

The findings from 2005 through 2009 are similar to the results from the NYC Study, which found that 74% of the fatal and serious injury crashes occurred at intersections. Nationally, however, roughly 46% of pedestrian crashes are intersection-related.

Table 18: Intersection-Related Pedestrian Crashes

	2005	2006	2007	2008	2009	Total
All Crashes						
Intersection-Related	2,671 78.4%	2,890 76.4%	2,862 77.7%	2,720 78.1%	2,451 78.3%	13,594 77.7%
Non Intersection-Related	735 21.6%	891 23.6%	824 22.4%	764 21.9%	679 21.7%	3,893 22.3%
Total (Year %)	3,406 (19.5%)	3,781 (21.6%)	3,686 (21.1%)	3,484 (19.9%)	3,130 (17.9%)	17,487 100.0%
Fatal and Serious Injury Crashes						
Intersection-Related	522 77.8%	490 75.0%	427 75.6%	391 98.7%	401 77.7%	2,231 79.7%
Non Intersection-Related	149 22.2%	163 25.0%	138 24.4%	5 1.3%	115 22.3%	570 20.3%
Total (Year %)	671 (24.0%)	653 (23.3%)	565 (20.2%)	396 (14.1%)	516 (18.4%)	2,801 100.0%

The 20 intersections with the highest incidence of pedestrian crashes were identified and are displayed in **Map 11** on the next page and listed in **Table 19**, following. The map and table actually portray 22 intersections, as there were eight intersections with 17 crashes each. These 22 intersections accounted for 434 pedestrian crashes, or 3.2% of all intersection-related crashes. The most crashes occurred at Ashland Ave. and 63rd St., with 29 crashes.

Map 11: Intersections with Highest Pedestrian Crash Counts (2005-2009)

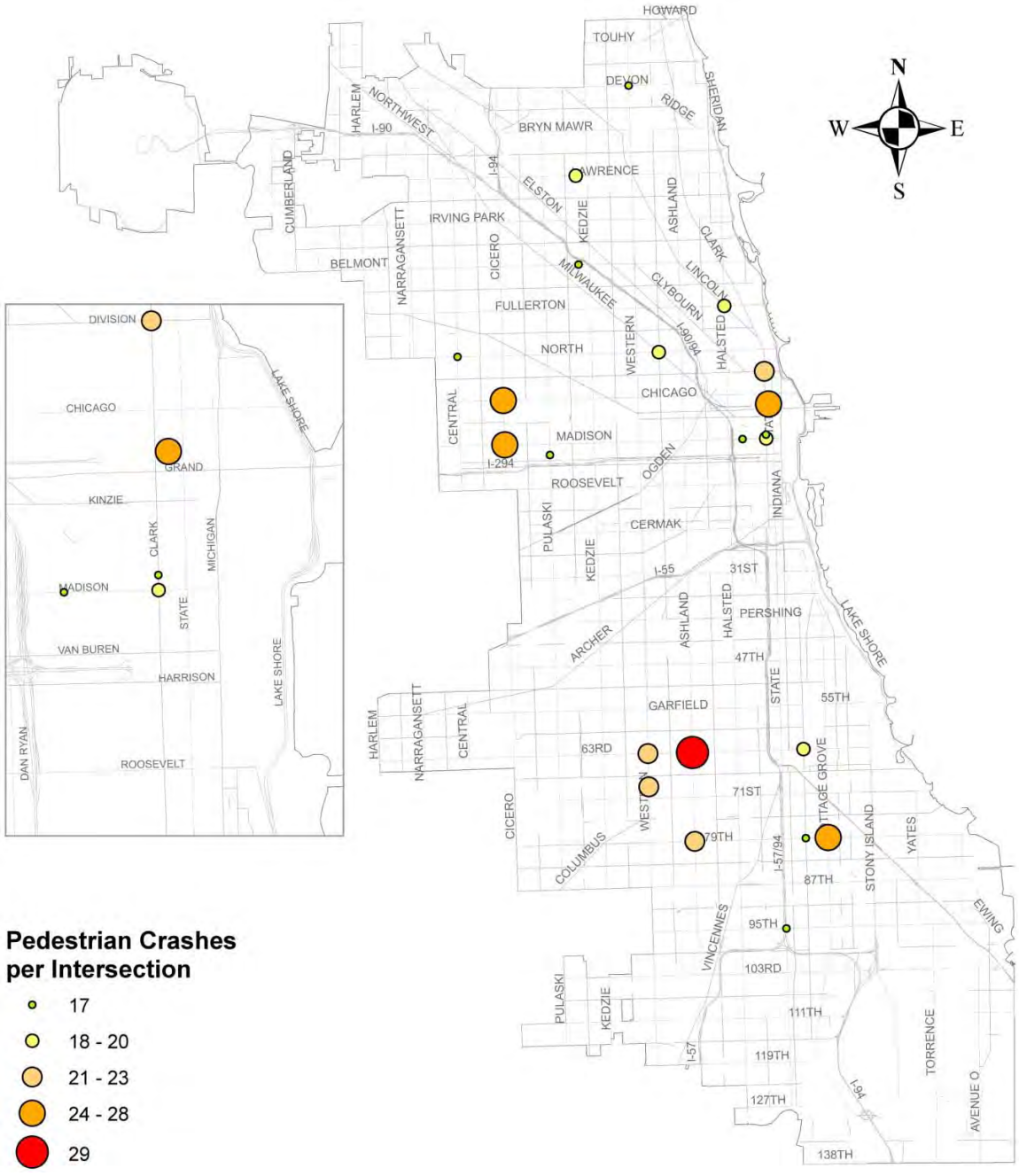


Table 19: Intersections with Highest Pedestrian Crash Counts (2005-2009)

Crash Count	N/S Street	E/W Street	Diagonal Street	Ward	CCA
29	Ashland Av	63rd St	n/a	16	West Englewood
27	Cicero Av	Madison St	n/a	28	Austin
26	Cottage Grove Av	79th St	n/a	6/8	Chatham/Greater Grand Crossing
26	Cicero Av	Chicago Av	n/a	28/37	Austin
25	Dearborn St	Ontario St	n/a	42	Near North Side
23	Ashland Av	79th St	n/a	17/21	Auburn Gresham
22	Western Av	63rd St	n/a	15	Chicago Lawn
21	Clark St	Division St	n/a	42	Near North Side
21	Western Av	69th St	n/a	17	Chicago Lawn
20	Kimball Av	Lawrence Av	n/a	33/39	Albany Park
19	Halsted St	Fullerton Av	Lincoln Av	43	Lincoln Park
19	Damen Av	North Av	Milwaukee Av	1/32	West Town
19	King Dr	63rd St	n/a	20	Greater Grand Crossing/ Washington Park/Woodlawn
18	Clark St	Madison St	n/a	42	Loop
17	Kimball Av	Belmont St	n/a	35	Avondale
17	King Dr	79th St	n/a	6	Chatham/Greater Grand Crossing
17	Central Av	North Av	n/a	29/37	Austin
17	State St	95th St	n/a	6/21	Roseland
17	Clinton St	Madison St	n/a	2/42	Near West Side
17	Pulaski Rd	Jackson Blvd	n/a	28	West Garfield Park
17	Western Av	Devon Av	n/a	50	West Ridge
17	Clark St	Washington St	n/a	42	Loop

The intersections with the most fatal and serious injury crashes were also identified. Examining the fatal and serious injury crashes that occurred at intersections revealed that 6 intersections had five fatal and serious injury crashes and 24 intersections had four. In the case of these crashes, the top 30 intersections accounted for 5.6% of all intersection-related fatal and serious injury pedestrian crashes. **Map 12** on the next page displays these intersections and **Table 20**, following, lists the results.

Map 12: Intersections with the Highest Fatal (K) and Serious Injury (A) Pedestrian Crash Counts (2005-2009)

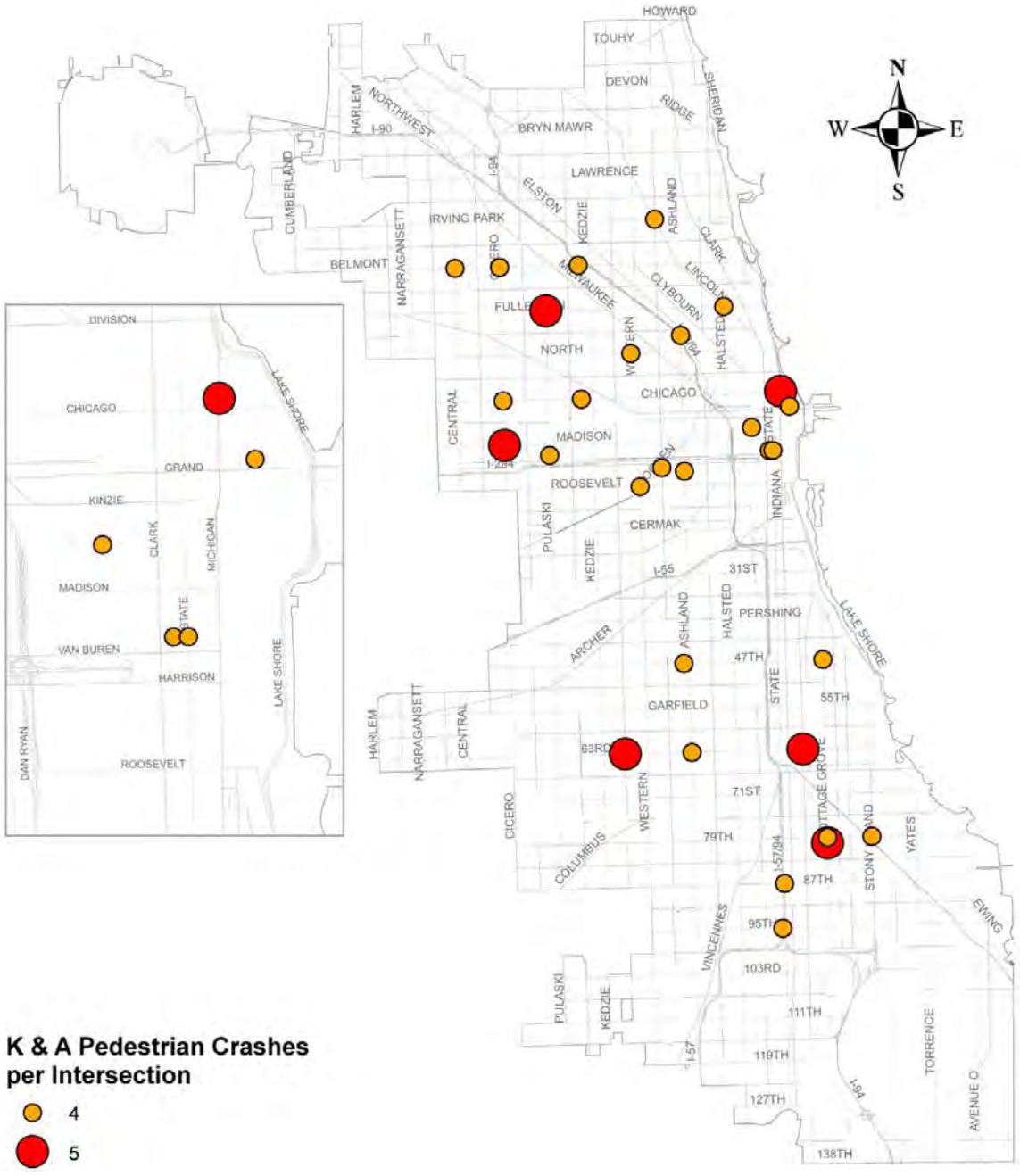


Table 20: Intersections with the Highest Fatal and Serious Injury Crash Counts (2005-2009)

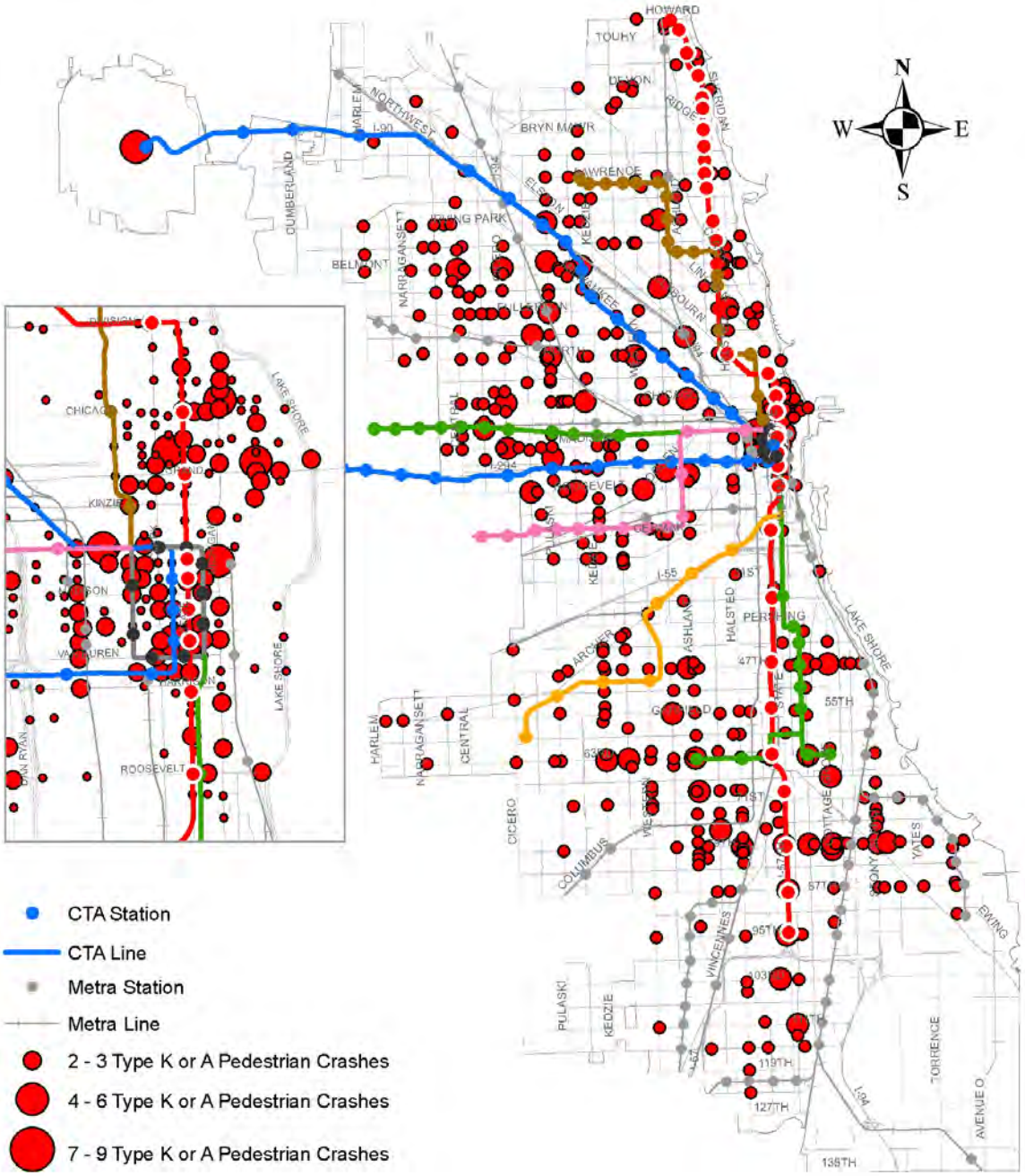
Crash Count	N/S Street	E/W Street	Diagonal Street	Ward	CCA
5	Michigan Av	Pearson St	n/a	42	Near North Side
5	Pulaski Rd	Fullerton Av	n/a	30/31	Hermosa/Logan Square
5	Cottage Grove Av	80th St	n/a	8	Chatham
5	King Dr	63rd St	n/a	20	Greater Grand Crossing/ Washington Park/Woodlawn
5	Cicero Av	Madison St	n/a	28	Austin
5	California Av	63rd St	n/a	15	Chicago Lawn
4	Ashland Av	63rd St	n/a	16	West Englewood
4	Homan Av	Chicago Av	n/a	27	Humboldt Park
4	Ashland Av	Cortland St	n/a	32	Logan Square
4	Halsted St	Fullerton Av	Lincoln Av	43	Lincoln Park
4	Cottage Grove Av	47th St	n/a	4	Kenwood/Grand Boulevard
4	Kimball Av	Belmont Av	n/a	35	Avondale
4	Central Av	Belmont Av	n/a	30/38	Portage Park/Belmont Cragin
4	Stony Island Av	79th St	South Chicago Av	5/8	Avalon Park/South Chicago/South Shore
4	Cottage Grove Av	79th St	n/a	6/8	Chatham/Greater Grand Crossing
4	Campbell Av	North Av	n/a	1/26	West Town
4	Ashland Av	Polk St	n/a	2/25	Near West Side
4	Fairbanks Ct	Ohio St	n/a	42	Near North Side
4	Dearborn St	Jackson Blvd	n/a	2/42	Loop
4	Pulaski Rd	Jackson Blvd	n/a	28	West Garfield Park
4	Lafayette Av	95th St	n/a	21	Roseland
4	Paulina St*	47th St	n/a	3/20	New City
4	Wacker Dr	Lake St	n/a	42	Loop
4	Western Av	Roosevelt Rd	n/a	25/28	Near West Side
4	Cicero Av	Belmont Av	n/a	30/31	Portage Park/Belmont Cragin
4	Damen Av	Irving Park Rd	Lincoln Av	47	North Center
4	State St	Jackson Blvd	n/a	2/42	Loop
4	Cicero Av	Chicago Av	n/a	28/37	Austin
4	State St	87th St	n/a	6	Chatham
4	Damen Av	n/a	Ogden Av	2/25	Near West Side

*Only non-signalized high-crash intersection

6.9 Chicago Transit Authority Transit Stations

An overlay of CTA and Metra rail lines over pedestrian crashes is shown in **Map 13**.

Map 13: CTA and Metra Rail Lines with Fatal (K) and Serious Injury (A) Pedestrian Crashes (2005-2009)



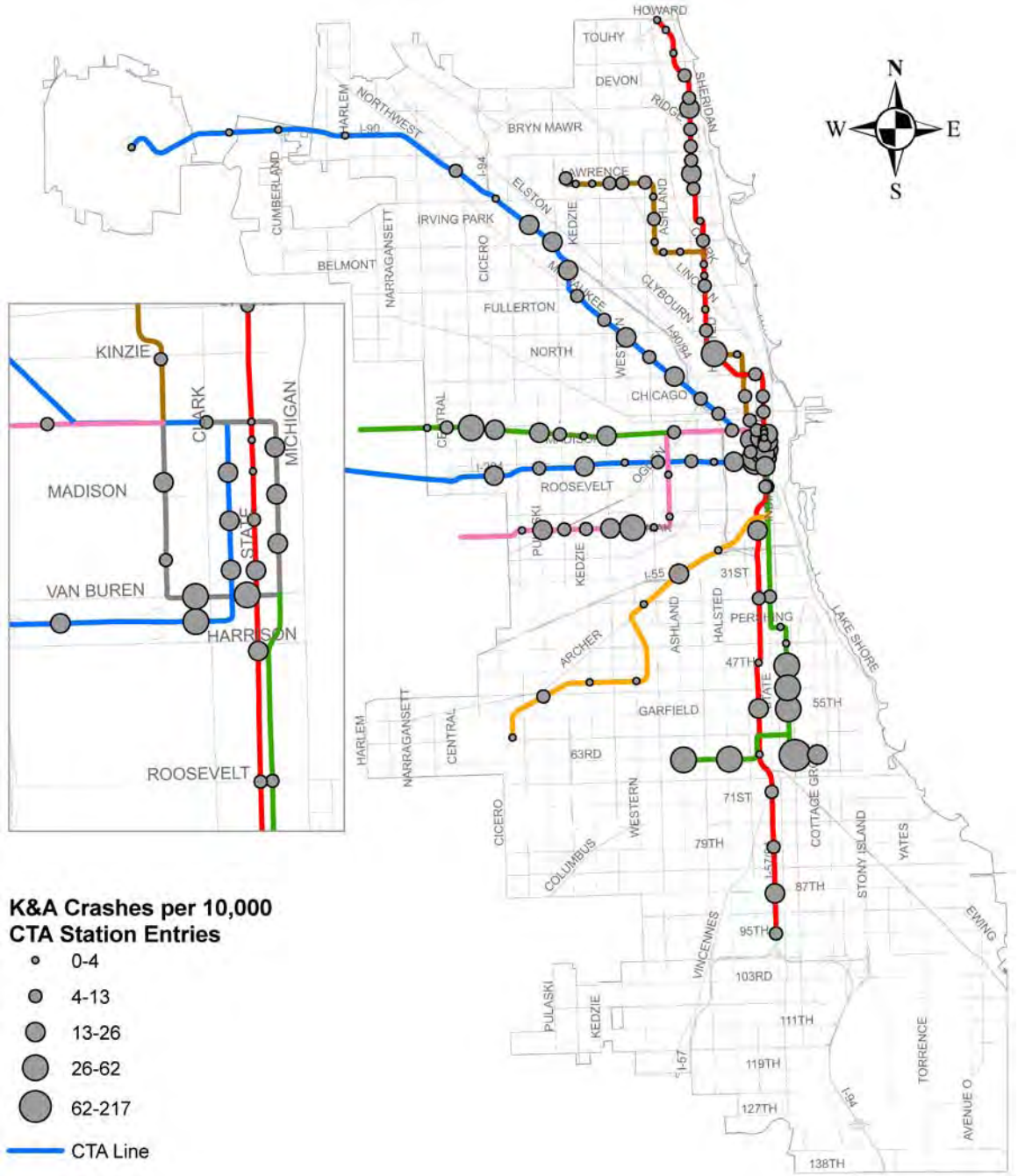
Map 13 shows a relationship between certain transit stations and high levels of pedestrian crashes. Transit stations with the highest number of pedestrian crashes appear to be along the southern corridor of the Red Line, the Blue Line along Milwaukee Avenue, and several stations along the Green Line.

An analysis of the crashes near CTA rail stations was conducted to quantify crashes by station in order to compare the stations relative to each other. For this analysis, the average number of fatal and serious injury pedestrian crashes per day over the five-year period, within 1/8 mile of the station, was normalized by the average number of customers entering a station in a day. (See **Map 14**.) This distance was selected to capture crashes near the station while minimizing crashes that would be double-counted due to stations that are closely spaced. Several locations along the Brown Line, Red Line, and in the Loop have stations that are spaced at ¼-mile or closer. **Table 21** lists the top ten CTA stations from this analysis.

Table 21: CTA Stations with Top Ten Fatal (K) and Serious Injury (A) Pedestrian Crashes (2005-2009) per 10,000 Daily Entries (2010)

Line & Station	Entries/Day	Avg. K&A Crashes/ Day	K&A Crashes/100,000 Daily Entries
Green Line - King Drive	508	0.00603	1.19
Green Line - Ashland/63rd	1,292	0.00438	0.34
Green Line - Laramie	1,223	0.00384	0.31
Green Line - 47th	1,123	0.00329	0.29
Pink Line - Western/Douglas	899	0.00219	0.24
Green Line - Halsted/63rd	734	0.00164	0.22
Loop Elevated - Library	3,442	0.00767	0.22
Blue Line - LaSalle	2,133	0.00438	0.21
Loop Elevated - LaSalle/Van Buren	2,178	0.00438	0.20
Green Line - Garfield	1,123	0.00219	0.20

Map 14: Fatal (K) and Serious Injury (A) Pedestrian Crashes (2005-2009) per 10,000 CTA Station Entries (2010)



6.10 Schools

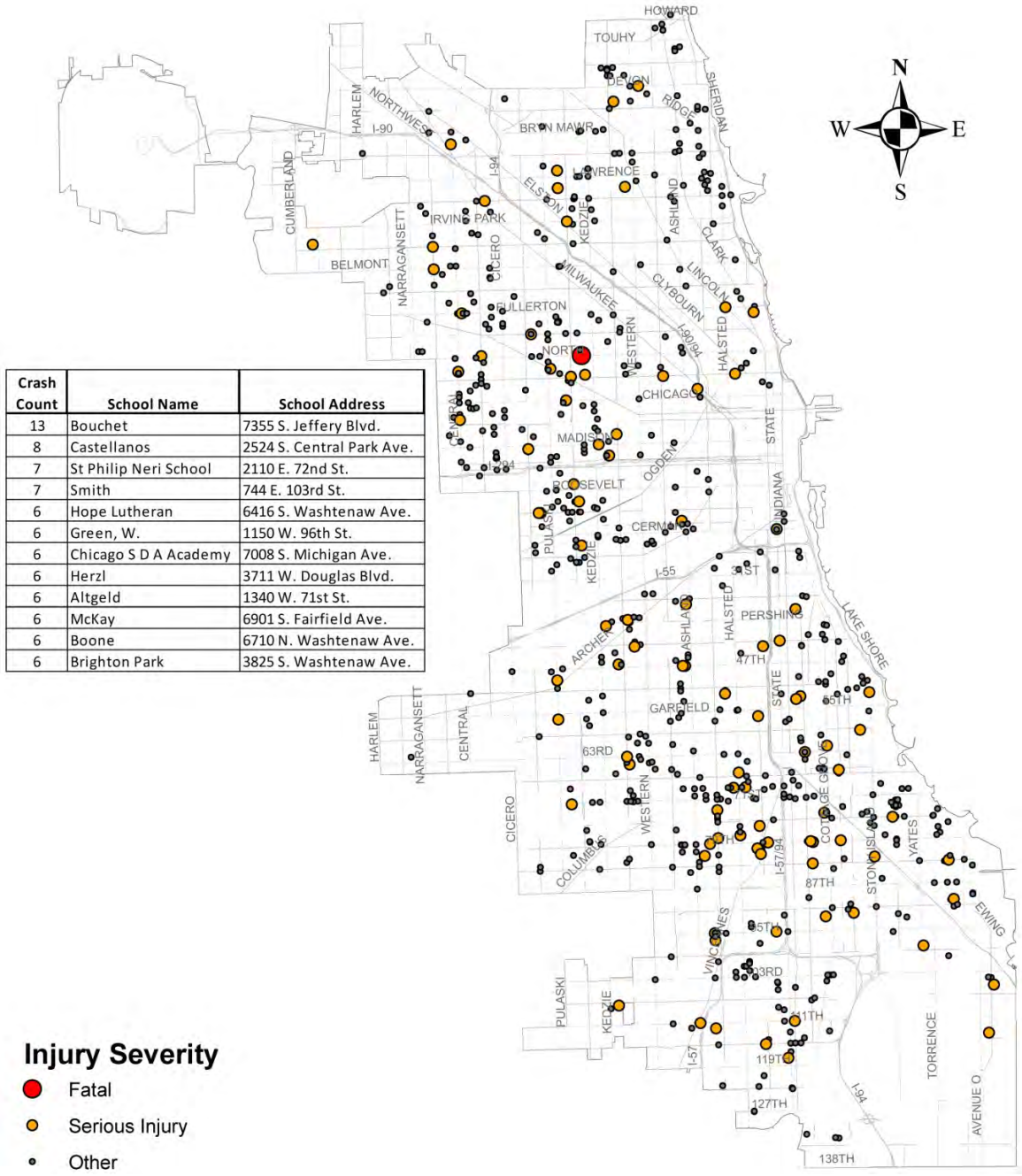
Primary School-Related Crashes

School-related crashes were defined as those involving school-aged youth and occurring within ¼-mile of a school during typical school arrival and dismissal times. The school arrival and dismissal times were taken as 7:00 to 9:00 a.m. and 1:00 to 4:00 p.m., Monday through Friday. Crashes near primary schools, grades kindergarten (K) through 8, were analyzed separately from crashes near high schools, grades 9 through 12. All schools that included any grade level from K through 8th grade were considered primary schools. Crashes that occurred during the summer months were included in this analysis as many schools adhere to a year-round schedule or host summer education programs. Primary school-related crashes included youths aged 5 to 14 and high school-related crashes included youths aged 15 to 18.

There were a total of 706 primary school-related crashes during this five-year period. Of those, 1 was fatal and 95 resulted in serious injury.

Map 15 on the following page displays the primary school-related crashes for youths aged 5 to 14 and lists the primary schools with the highest crash counts. One school, Bouchet Elementary Math and Science Academy, in the South Shore community area, stands out with 13 school-related crashes. Otherwise, the crash patterns show a relatively flat distribution near schools. As noted in **Section 4.3** above, males in this age group were much more likely to be involved in crashes than females.

Map 15: Primary School-Related (Ages 5-14) Pedestrian Crashes (2005-2009)

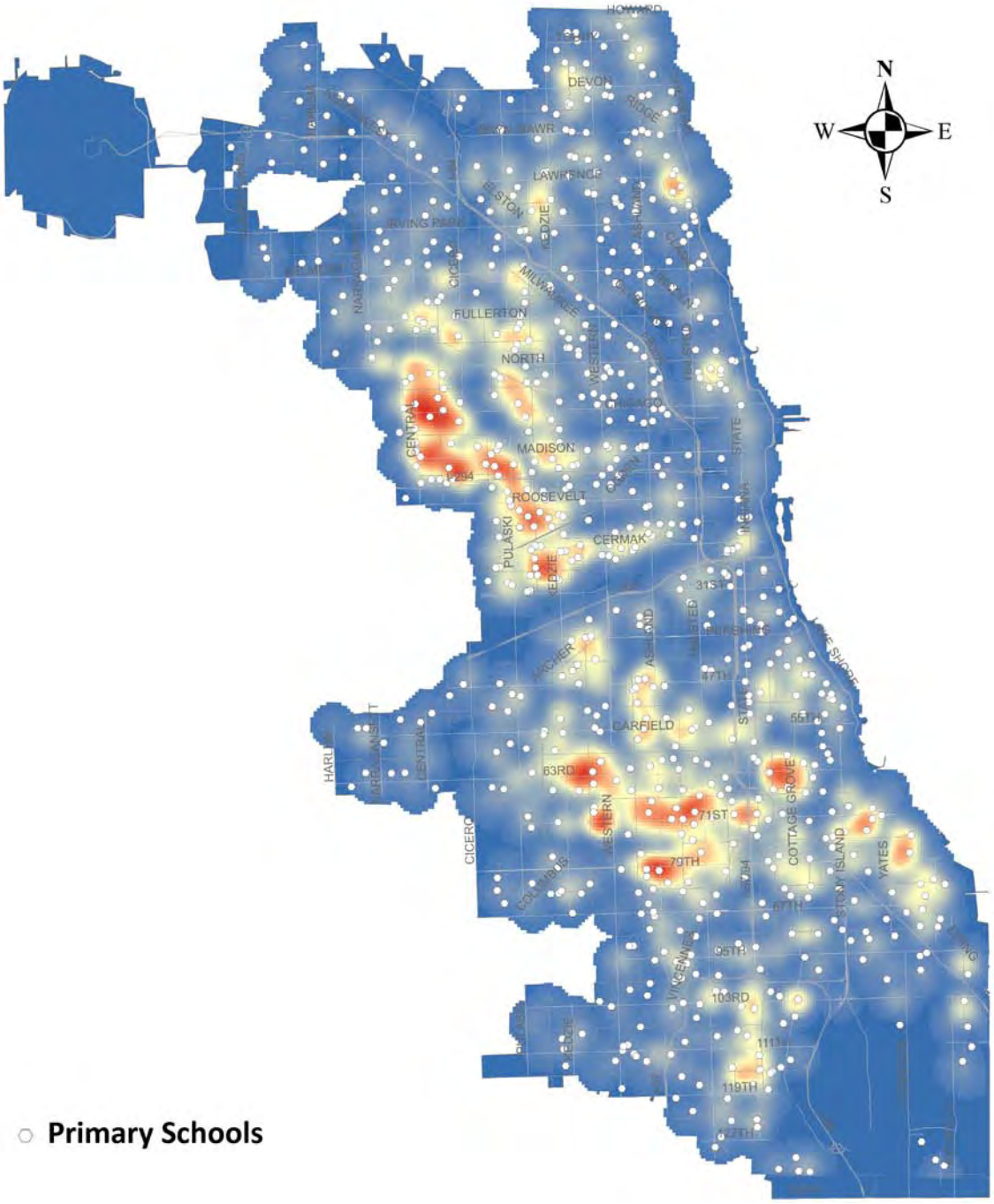


Crash Count	School Name	School Address
13	Bouchet	7355 S. Jeffery Blvd.
8	Castellanos	2524 S. Central Park Ave.
7	St Philip Neri School	2110 E. 72nd St.
7	Smith	744 E. 103rd St.
6	Hope Lutheran	6416 S. Washtenaw Ave.
6	Green, W.	1150 W. 96th St.
6	Chicago S D A Academy	7008 S. Michigan Ave.
6	Herzl	3711 W. Douglas Blvd.
6	Altgeld	1340 W. 71st St.
6	McKay	6901 S. Fairfield Ave.
6	Boone	6710 N. Washtenaw Ave.
6	Brighton Park	3825 S. Washtenaw Ave.

Injury Severity
- Fatal
- Serious Injury
- Other

It is difficult to determine any trends from the primary school-related crashes. Thus, a kernel density of crashes involving this age group was developed, using all crashes, instead of limiting it to school arrival and dismissal times. **Map 16** on the next page shows these results. The primary schools are laid over the crash intensity. This map indicates that there are distinct regions of the city where a high level of youth crashes occurred, notably, the west and south sides. The most intense areas lie within the Austin, Chicago Lawn, and Auburn Gresham community areas.

Map 16: Kernel Density of All Pedestrian Crashes (2005-2009) for Primary School-Aged Youth (5-14) and Primary Schools

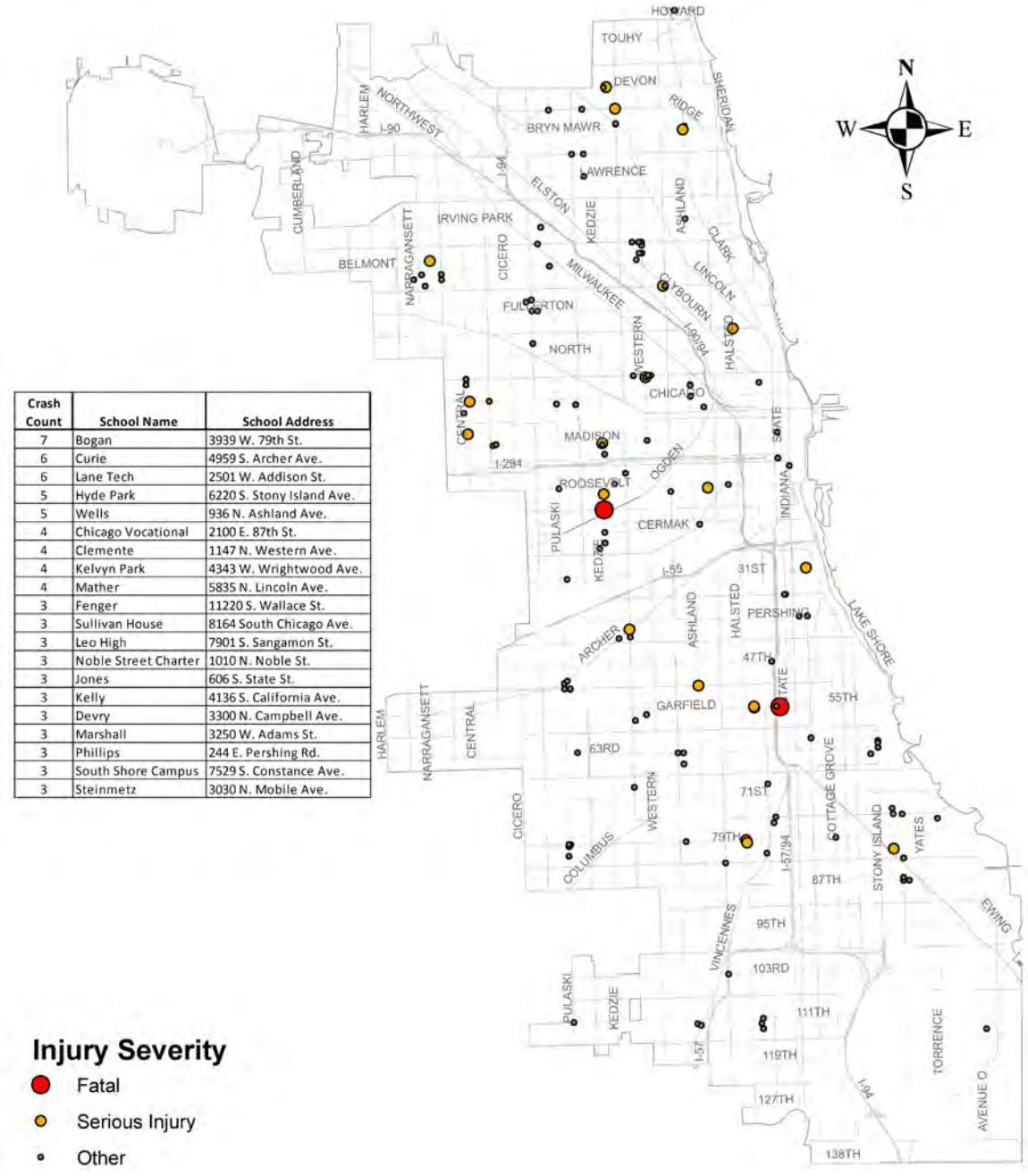


High School-Related Crashes

High school-related crashes of youths aged 15 to 18 numbered 155; of which 2 were fatal and 20 were serious injury crashes.

The top 20 high schools with the highest crash counts using the school-related crash criteria noted above are shown and listed in **Map 17**. Similar to crashes near primary schools, the distribution of crashes near high schools was relatively flat.

Map 17: High School-Related (Ages 15-18) Pedestrian Crashes (2005-2009)



Crash Count	School Name	School Address
7	Bogan	3939 W. 79th St.
6	Curie	4959 S. Archer Ave.
6	Lane Tech	2501 W. Addison St.
5	Hyde Park	6220 S. Stony Island Ave.
5	Wells	936 N. Ashland Ave.
4	Chicago Vocational	2100 E. 87th St.
4	Clemente	1147 N. Western Ave.
4	Kelvyn Park	4343 W. Wrightwood Ave.
4	Mather	5835 N. Lincoln Ave.
3	Fenger	11220 S. Wallace St.
3	Sullivan House	8164 South Chicago Ave.
3	Leo High	7901 S. Sangamon St.
3	Noble Street Charter	1010 N. Noble St.
3	Jones	606 S. State St.
3	Kelly	4136 S. California Ave.
3	Devry	3300 N. Campbell Ave.
3	Marshall	3250 W. Adams St.
3	Phillips	244 E. Pershing Rd.
3	South Shore Campus	7529 S. Constance Ave.
3	Steinmetz	3030 N. Mobile Ave.

6.11 Senior Crashes

The spatial distribution of senior crashes also was analyzed. **Table 22** shows the senior crash distribution per ward.[10] The highest number of crashes occurs in the Loop (42nd Ward).

Table 22: Senior (65+) Pedestrian Crashes (2005-2009) by Ward

Crash Count	Ward	Crash Count	Ward
125	42	21	20
53	2	21	33
43	1	21	40
36	38	20	35
33	30	20	48
33	47	19	28
32	25	19	44
32	39	18	8
31	6	18	9
30	43	18	21
29	11	18	36
29	45	17	3
27	31	17	5
27	41	17	13
27	50	17	49
26	17	16	22
25	23	15	10
25	32	14	27
24	14	13	15
24	24	13	37
23	4	12	7
23	26	10	29
23	46	8	34
22	12	7	18
22	16	7	19

As senior crashes more often result in fatalities or serious injuries, **Map 18** plots the locations of the fatal and serious injury senior crashes. This map shows some concentrations of crashes in the Near North Side community area and northwest along Milwaukee Avenue. A kernel density map shows these concentrations more clearly in **Map 19**. The most notable concentrations occurred in the Loop and Near North Side community areas as a whole. Some corridors also stand out including Milwaukee Avenue between Kedzie Avenue and Pulaski Avenue, Western Avenue

[10] The total number of senior crashes per ward equals 1,220. Eighteen of the 1,238 total senior crashes were incorrectly geocoded and were not assigned a ward.

between 63rd Street and 71st Street and between Chicago Avenue and Grand Avenue, Fullerton Avenue between Cicero Avenue and Central Avenue, and Lawrence Avenue between Broadway Avenue and Ashland Avenue.

Map 19 also overlays the senior resource locations on the kernel density. These locations indicate where higher levels of senior pedestrian traffic may be, and also serve as potential outreach venues for senior pedestrian safety efforts.

Senior resources include the following:

Senior Centers – Regional or satellite centers that provide informational services to seniors. Services vary from fitness and wellness programs to employment, benefits and legal assistance. There are 19 senior centers in Chicago.

Senior Community Partners – Religious institutions or non-profit organizations that provide companionship services to seniors. Services include meals, activities and counseling. There are 33 senior community partners in Chicago.

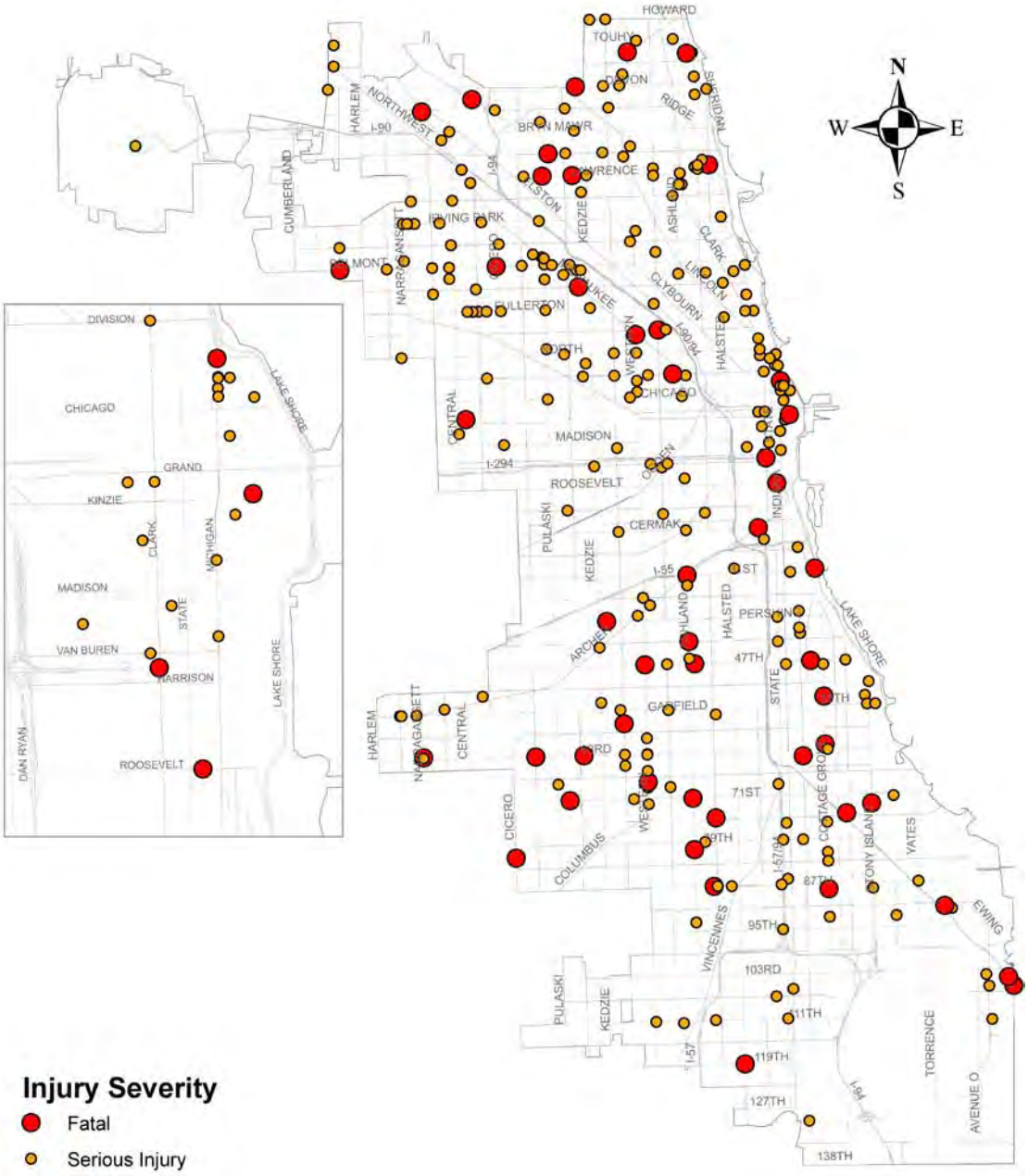
Senior Fitness Resources – Religious institutions, apartment complexes, or community centers that host city sponsored fitness programs with senior-friendly exercises and equipment. There are 57 senior fitness resources in Chicago.

Senior Golden Diners – Religious institutions, apartment complexes, or community centers that host city sponsored lunches served to seniors. There are 71 senior golden diners in Chicago.

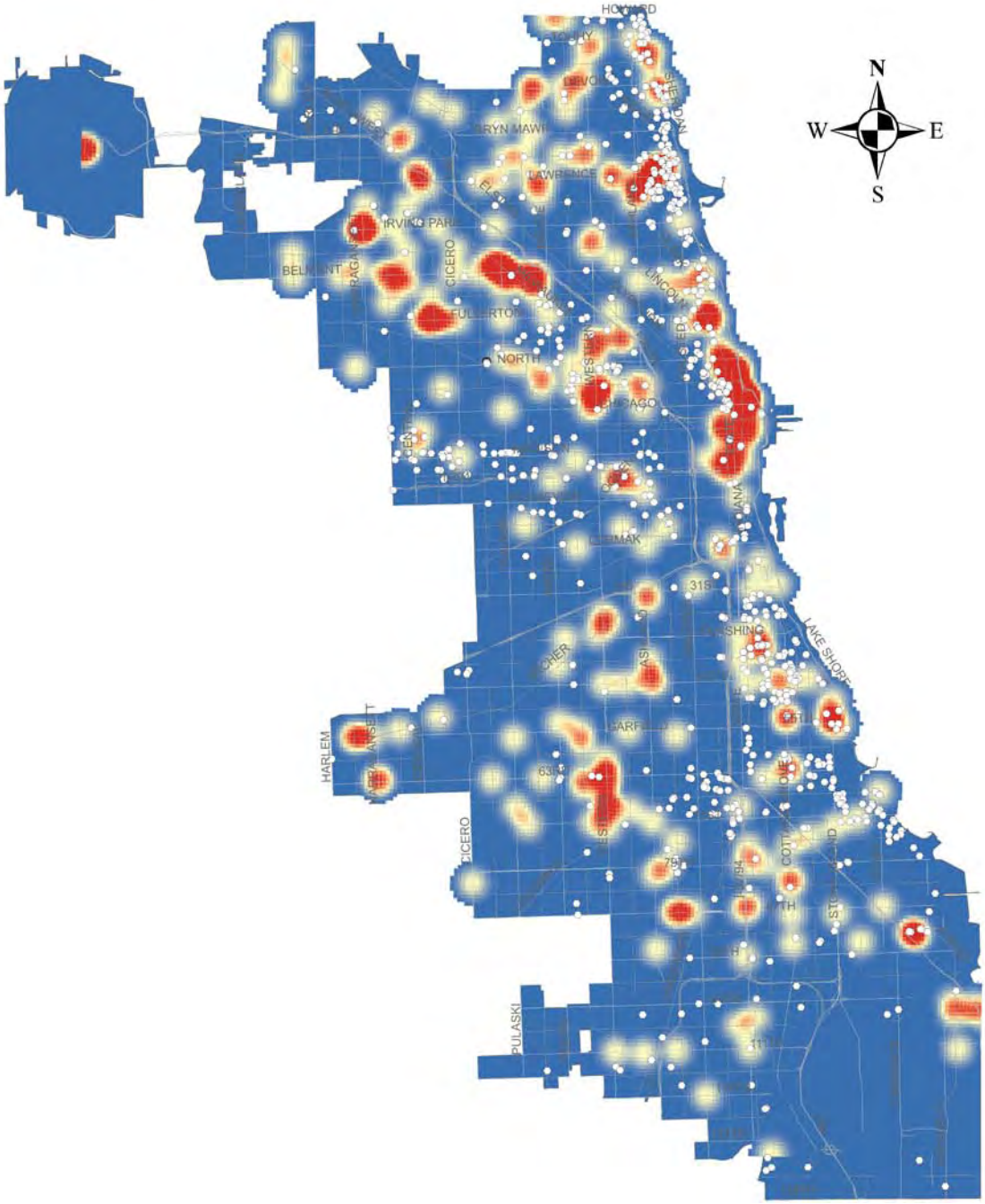
Senior Housing Resources – Any senior housing complex, including nursing homes, group homes, assisted living centers and multi-family units. There are 686 senior housing resources in Chicago.

Several senior resources throughout Chicago provide numerous senior services and are classified as more than one resource type.

Map 18: Senior (65+) Pedestrian Crashes (2005-2009)



Map 19: Senior (65+) Pedestrian Crashes (2005-2009) Kernel Density and Senior Resources



7 ENVIRONMENTAL

Analyses of environmental factors were conducted to understand what the conditions were at the time and location of the crash. Weather and visibility factors were analyzed and compared to the 2001-2005 Study. Characteristics of the roadway were also analyzed, including number of travel lanes, roadway type, intersection geometry, traffic controls and vehicle type and use. Several of these analyses were normalized to identify roadway characteristics that were over-represented in pedestrian crashes.

7.1 Light and Weather

The percentage of crashes by lighting condition (**Table 23**) shows that most crashes occurred during daylight hours with the second highest percentage occurring during darkness, along lighted roads. The high proportion of crashes along lighted roads compared to along unlit roads is expected given the extent of street lighting used in Chicago. Further, pedestrians are more attracted to well-lit streets than dark streets and there are likely to be higher levels of pedestrian activity on those streets. These results are similar to those from the 2001-2005 Study.

Table 23: Crashes by Light Condition by Year

	2005	2006	2007	2008	2009	Total
Daylight	2,090	2,409	2,358	2,243	1,965	11,065
	61.4%	63.7%	64.0%	64.4%	62.8%	63.3%
Dawn and Dusk	193	199	149	164	165	870
	5.7%	5.3%	4.0%	4.7%	5.3%	5.0%
Darkness	179	221	237	209	160	1,006
	5.3%	5.8%	6.4%	6.0%	5.1%	5.8%
Darkness, Lighted Road	904	906	893	813	789	4,305
	26.5%	24.0%	24.2%	23.3%	25.2%	24.6%
Unknown	40	46	49	55	51	241
	1.2%	1.2%	1.3%	1.6%	1.6%	1.4%
Total	3,406	3,781	3,686	3,484	3,130	17,487
(Year %)	(19.5%)	(21.6%)	(21.1%)	(19.9%)	(17.9%)	100.0%

The weather data (**Table 24)** indicate that 77.4% of pedestrians were struck during clear conditions. However, pedestrian exposure is typically greater during fair weather. As would be expected, the data for roadway conditions (**Table 25**) are similar and show that 73% of pedestrians were struck on dry roadways. These data show slightly different results from the 2001-2005 Study, during which 83% of pedestrians were struck in clear conditions and 80% on dry roadways.

Table 24: Crashes by Weather Condition by Year

	2005	2006	2007	2008	2009	Total
Clear	2,756	2,892	2,932	2,610	2,340	13,530
	80.9%	76.5%	79.5%	74.9%	74.8%	77.4%
Rain	372	546	392	441	477	2,228
	10.9%	14.4%	10.6%	12.7%	15.2%	12.7%
Snow	133	51	145	212	131	672
	3.9%	1.3%	3.9%	6.1%	4.2%	3.8%
Fog/Smoke/Haze	16	164	86	75	58	399
	0.5%	4.3%	2.3%	2.2%	1.9%	2.3%
Sleet/Hail	19	12	18	21	24	94
	0.6%	37.5%	64.3%	63.6%	104.3%	0.5%
Severe Cross Wind	4	4	3	4	0	15
	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%
Other	23	32	28	33	23	139
	0.7%	0.8%	0.8%	0.9%	0.7%	0.8%
Unknown	83	80	82	88	77	410
	2.4%	2.1%	2.2%	2.5%	2.5%	2.3%
Total	3,406	3,781	3,686	3,484	3,130	17,487
(Year %)	(19.5%)	(21.6%)	(21.1%)	(19.9%)	(17.9%)	100.0%

Table 25: Crashes by Roadway Conditions by Year

	2005	2006	2007	2008	2009	Total
Dry	2,563	2,875	2,747	2,430	2,182	12,797
	75.2%	76.0%	74.5%	69.7%	69.7%	73.2%
Wet	550	684	622	664	672	3,192
	16.1%	18.1%	16.9%	19.1%	21.5%	18.3%
Snow/Slush	106	43	119	196	123	587
	3.1%	1.1%	3.2%	5.6%	3.9%	3.4%
Ice	10	8	12	33	16	79
	0.3%	0.2%	0.3%	0.9%	0.5%	0.5%
Sand/Mud/Dirt	2	4	0	5	3	14
	0.1%	50.0%	0.0%	125.0%	75.0%	0.1%
Other	4	8	7	4	4	27
	0.1%	0.2%	0.2%	0.1%	0.1%	0.2%
Unknown	171	159	179	152	130	791
	5.0%	4.2%	4.9%	4.4%	4.2%	4.5%
Total	3,406	3,781	3,686	3,484	3,130	17,487
(Year %)	(19.5%)	(21.6%)	(21.1%)	(19.9%)	(17.9%)	100.0%

7.2 Number of Travel Lanes

Table 26 shows the crashes by number of travel lanes for all pedestrian crashes and fatal and serious injury pedestrian crashes. The number of lanes refers to the total number of through lanes on a roadway and includes both directions of travel, but does not include turn lanes. 44.2% of pedestrian crashes occurred on roadways with two travel lanes. The next highest proportion occurred on roadways with four travel lanes, at 25.9%, followed by roadways with one travel lane, at 21.4%. It should be noted that the percentage of fatal and serious injury crashes was lower than all crashes for one and two-lane roadways, but was higher on four-lane roadways. These results are similar to those from the 2001-2005 Study.

Table 26: Pedestrian Crashes by Number of Travel Lanes

Lanes	2005	2006	2007	2008	2009	Total
All Crashes						
1	576	690	607	553	485	2,911
	21.3%	23.5%	21.4%	20.7%	20.0%	21.4%
2	1,199	1,258	1,273	1,181	1,083	5,994
	44.3%	42.8%	45.0%	44.1%	44.8%	44.2%
3	102	102	114	121	96	535
	3.8%	3.5%	4.0%	4.5%	4.0%	3.9%
4	694	756	715	697	655	3,517
	25.6%	25.7%	25.3%	26.1%	27.1%	25.9%
5	21	25	25	27	33	131
	0.8%	0.9%	0.9%	1.0%	1.4%	1.0%
6+	116	108	97	96	68	485
	4.3%	3.7%	3.4%	3.6%	2.8%	3.6%
Total	2,708	2,939	2,831	2,675	2,420	13,573
(Year %)	(20.0%)	(21.7%)	(20.9%)	(19.7%)	(17.8%)	100.0%
Fatal and Serious Injury Crashes						
1	102	118	88	67	65	440
	18.6%	23.0%	20.0%	17.0%	16.2%	19.1%
2	219	211	187	168	172	957
	40.0%	41.1%	42.5%	42.5%	42.8%	41.6%
3	17	18	19	14	12	80
	3.1%	3.5%	4.3%	3.5%	3.0%	3.5%
4	170	139	122	120	129	680
	31.0%	27.1%	27.7%	30.4%	32.1%	29.6%
5	6	8	4	10	6	34
	1.1%	1.6%	0.9%	2.5%	1.5%	1.5%
6+	34	19	20	16	18	107
	6.2%	3.7%	4.5%	4.1%	4.5%	4.7%
Total	548	513	440	395	402	2,298
(Year %)	(23.8%)	(22.3%)	(19.1%)	(17.2%)	(17.5%)	100.0%

Without data on the overall distribution of roadways and number of lanes in Chicago, it is difficult to determine if the crashes are proportional to the roadway characteristics. However, it is likely that there are more than twice as many two-lane roads than four-lane roads. This can be

assumed by examining the length of local and collector streets compared to the length of arterial streets, as defined by IDOT's roadway classification. The IDOT roadway classifications are included in **Appendix D.** While the number of lanes on Chicago's streets are not consistent along the entire length of the street and are not directly related to the functional classifications, arterial streets are more likely to be four lanes wide than collector and local streets. Arterial streets account for roughly 10% of all streets in Chicago, by mile. Pedestrian crashes on four-lane roads are therefore likely overrepresented; meaning the proportion of crashes attributed to four-lane roads is larger than the proportion of the length of four-lane roads to the overall length of roads in Chicago.

Table 27 shows the crashes that occurred within the high crash corridors by the number of travel lanes. This analysis included only mid-block crashes. In the IDOT data, crashes coded as "0" for the number of lanes were those taking place at intersections. These instances were removed for this analysis. In addition, several crashes were coded as intersection-related, but included a value for the number of lanes field. These also were removed for this analysis.

More than 50.0% of the crashes along these corridors were on four-lane roadways, compared to 25.9% of crashes citywide that occurred on four-lane roadways.

Table 27: Pedestrian Crashes in High Crash Corridors by Number of Travel Lanes

	2005	2006	2007	2008	2009	Total
1	9	8	13	3	7	40
	13.6%	12.7%	15.9%	4.1%	10.8%	11.5%
2	21	17	21	22	22	103
	31.8%	27.0%	25.6%	30.1%	33.8%	29.5%
3	1	0	1	0	0	2
	1.5%	0.0%	1.2%	0.0%	0.0%	0.6%
4	32	37	43	42	31	185
	48.5%	58.7%	52.4%	57.5%	47.7%	53.0%
5	0	0	1	1	2	4
	0.0%	0.0%	1.2%	1.4%	3.1%	1.1%
6+	3	1	3	5	2	14
	4.5%	1.6%	3.7%	6.8%	3.1%	4.0%
	0	0	0	0	1	1
Unknown	0.0%	0.0%	0.0%	0.0%	1.5%	0.3%
Total	66	63	82	73	65	349
(Year %)	(18.9%)	(18.1%)	(23.5%)	(20.9%)	(18.6%)	100.0%

7.3 Roadway Type

The number of lanes is often related to the roadway type and similar to four-lane roadways, arterials were overrepresented in pedestrian crashes. **Table 28** on the following page shows the breakdown of pedestrian crashes by roadway type. The overrepresentation of crashes along

arterials was possibly related to the higher speeds and traffic volumes on arterials compared with collector and local streets. The roadway types of the crashes are coded based on the IDOT roadway functional classification system.

Among all pedestrian crashes, 23.3% occurred on local streets, 28.8% on collectors, and 47.4% on either principal or minor arterials. It is expected that the breakdown of fatal and serious injury crashes would be even more skewed towards collector and arterial streets due to the higher travel speeds and greater pedestrian crossing distances along those roads. When considering fatal and serious crashes only, the trend was slightly more pronounced with 20.0% of the fatal and serious injury crashes occurring on local streets, 29.3% on collector streets, and roughly 49.8% on arterial streets.

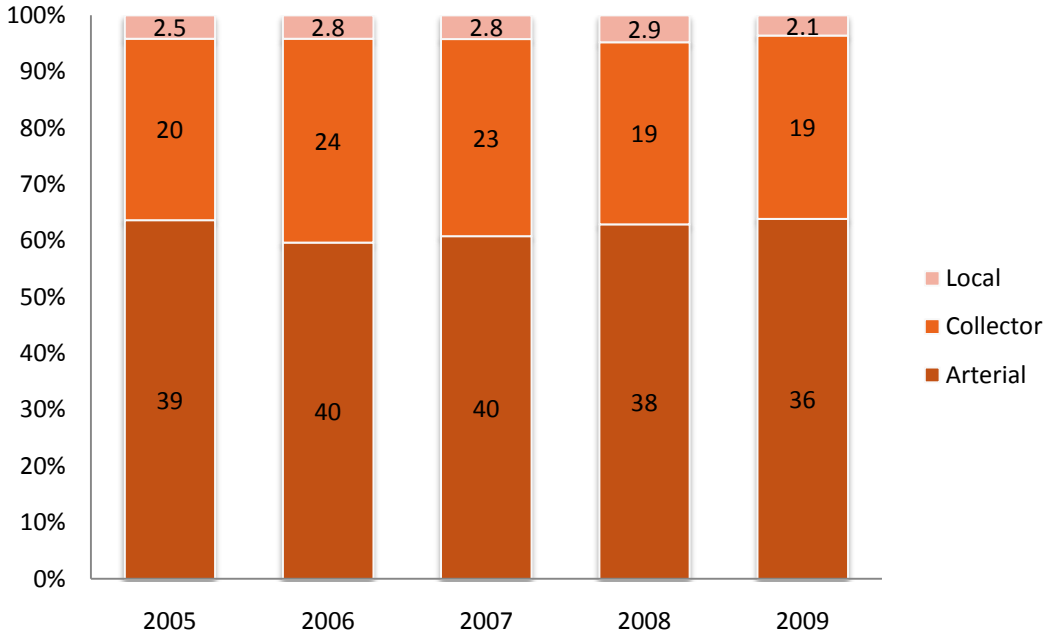
All of the high crash corridors outside the CBD were arterials. Four of the twelve were principal arterials and the remaining were minor arterials. Among the high crash corridors in the CBD, three of the five were collector streets and two were principal arterials.

Table 28: Pedestrian Crashes by Roadway Type

	2005	2006	2007	2008	2009	Total
All Crashes						
Principal Arterial	653	646	625	601	552	3,077
	19.4%	17.3%	17.2%	17.5%	18.0%	17.9%
Minor Arterial	988	1,047	1,060	1,004	987	5,086
	29.3%	28.1%	29.2%	29.3%	32.2%	29.5%
Collector	929	1,148	1,086	923	877	4,963
	27.6%	30.8%	29.9%	26.9%	28.6%	28.8%
Local Road or Street	778	863	851	888	634	4,014
	23.1%	23.2%	23.4%	25.9%	20.7%	23.3%
Interstate	21	20	11	10	19	81
	0.6%	0.5%	0.3%	0.3%	3.8%	0.5%
Total (Year %)	3,369	3,724	3,633	3,426	3,069	17,221
	(19.6%)	(21.6%)	(21.1%)	(19.9%)	(17.8%)	100.0%
Fatal and Serious Injury Crashes						
Principal Arterial	129	121	107	90	92	539
	19.4%	18.9%	19.4%	18.6%	18.5%	19.0%
Minor Arterial	212	192	171	132	167	874
	31.8%	30.0%	31.0%	27.2%	33.6%	30.8%
Collector	181	189	175	140	147	832
	27.2%	29.5%	31.8%	28.9%	29.6%	29.3%
Local Road or Street	134	131	96	119	87	567
	20.1%	20.4%	17.4%	24.5%	17.5%	20.0%
Interstate	10	8	2	4	4	28
	1.5%	1.2%	0.4%	0.8%	0.8%	1.0%
Total (Year %)	666	641	551	485	497	2,840
	(23.5%)	(22.6%)	(19.4%)	(17.1%)	(17.5%)	100.0%

Comparing the crash incidence on each type of roadway to the total length of that type in Chicago revealed that the crash rates were much higher along arterial streets and were very low on local streets. Twenty-three percent of all pedestrian crashes occurred on local streets while 47% occurred on principal or minor arterials. However, local streets account for roughly 78% of overall street miles in Chicago while arterials account for slightly more than 10%. **Figure 26** shows these results.

Figure 26: Pedestrian Crash Rate per 10 Miles of Street by Roadway Type



An examination of roadway type by pedestrian age provides a more detailed view of where pedestrians were involved in crashes. While arterials are overrepresented in crashes among all age groups, this analysis reveals some interesting trends. Young pedestrians (0-14) were much more likely to be struck on local roads than all other age groups. Conversely, older pedestrians were more likely to be struck on arterials than on local roads or collectors. The 60-64 age group was the most likely to be struck on arterial or collector streets. (See **Table 29**.) These results are most likely a factor of the travel patterns of the different age groups.

Table 29: Pedestrian Crashes (2005-2009) by Age Group by Roadway Type

	0-4 yrs	5-14 yrs	15-18 yrs	19-29 yrs	30-59 yrs	60-64 yrs	65+ yrs	Total
Interstate	0	2	18	22	47	3	5	97
	0.0%	0.1%	1.2%	0.6%	0.7%	0.5%	0.2%	0.5%
Principal Arterial	30	244	263	566	1,369	126	455	3,053
	7.0%	8.4%	17.7%	16.7%	20.4%	22.7%	18.8%	17.1%
Minor Arterial	64	683	445	1,016	2,105	174	764	5,251
	15.0%	23.6%	30.0%	29.9%	31.3%	31.3%	31.6%	29.3%
Collector	84	727	386	1,053	1,980	184	667	5,081
	19.7%	25.1%	26.0%	31.0%	29.4%	33.1%	27.6%	28.4%
Local Road or Street	238	1,188	352	688	1,126	61	496	4,149
	55.7%	41.1%	23.7%	20.3%	16.7%	11.0%	20.5%	23.2%
N/A	11	49	19	51	99	8	31	268
	2.6%	1.7%	1.3%	1.5%	1.5%	1.4%	1.3%	1.5%
Total (Age Group %)	427 (2.4%)	2,893 (16.2%)	1,483 (8.3%)	3,396 (19.0%)	6,726 (37.6%)	556 (3.1%)	2,418 (13.5%)	17,899 100.0%

7.4 Intersection Geometry

An analysis of pedestrian crashes by intersection geometry was conducted to determine if more complicated intersections had more crashes. Chicago has several diagonal streets that radiate out from the CBD and cut through the city's street grid, creating five and six-leg intersections. At these intersections, pedestrians may cross along the most direct path, which often is not where there are marked crosswalks. Crossing along these paths also means that the pedestrian has farther to travel between sidewalks and is in the road for a longer period. These intersections also create opportunities for additional turning movements and conflicts.

The analysis was done by first using a spatial join in geographic information systems (GIS) to assign the number of legs to each intersection node. A buffer of 125 feet was used to capture the legs, to remain consistent with the definition of intersection-related crashes. The crashes within that buffer were also assigned to that intersection. Intersections with more than six legs reflect locations such as expressway interchanges and multi-level streets where numerous line segments converge in the GIS database.

Table 30 on the next page displays the results of this analysis. The distribution of crashes is consistent with the overall distribution of the intersections. In all, two to four-leg intersections accounted for 94.7% of all intersections while five to seven-leg intersections accounted for 4.7%, which is consistent with the breakdown of crashes. Thus, this indicates that the more complicated intersections were not overrepresented in crashes.

Table 30: Pedestrian Crashes by Intersection Legs

	2005	2006	2007	2008	2009	Total	% of Total Intersections
2-4	2,520	2,709	2,697	2,545	2,311	12,782	
	94.6%	94.0%	94.7%	94.1%	94.9%	94.5%	94.7%
5-7	135	150	126	147	114	672	
	5.1%	5.2%	4.4%	5.4%	4.7%	5.0%	4.7%
8-9	6	14	15	10	9	54	
	0.2%	0.5%	0.5%	0.4%	0.4%	0.4%	0.2%
10-12	4	8	9	2	2	25	
	0.2%	0.3%	0.3%	0.1%	0.1%	0.2%	0.3%
Total	2,665	2,881	2,847	2,704	2,436	13,533	
(Year %)	(19.7%)	(21.3%)	(21.0%)	(20.0%)	(18.0%)	100.0%	

7.5 Traffic Control

Table 31 on the next page shows the proportion of crashes by type of traffic control. These data include all pedestrian crashes, not only those occurring at intersections. Just under 50% of the pedestrian crashes occurred where there was no traffic control. This is down slightly from the 2001-2005 Study, when 55.0% of crashes occurred at uncontrolled locations. The percentage of crashes occurring at traffic signals and stop signs increased slightly from the time period 2001 through 2005, when it was 31.7% and 9.8%, respectively. Between 2005 and 2009, 33.4% occurred at a traffic signal and 11.0% at a stop sign or flashing light.

Table 31: Pedestrian Crashes by Type of Traffic Control

	2005	2006	2007	2008	2009	Total
No Controls	1,708	1,914	1,813	1,642	1,473	8,550
	50.1%	50.6%	49.2%	47.1%	46.9%	48.9%
Traffic Signal	1,155	1,142	1,227	1,204	1,112	5,840
	33.9%	30.2%	33.3%	34.6%	35.4%	33.4%
Stop sign/Flasher	330	458	400	404	339	1,931
	9.7%	12.1%	10.9%	11.6%	10.8%	11.0%
Yield	10	28	20	14	10	82
	0.3%	0.7%	0.5%	0.4%	0.3%	0.5%
Police/Flagman	12	25	19	23	15	94
	0.4%	0.7%	0.5%	0.7%	0.5%	0.5%
RR Crossing Gate	1	3	1	0	0	5
	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
Other RR Crossing	0	3	1	0	0	4
	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
School Zone	6	3	3	5	1	18
	0.2%	0.1%	0.1%	0.1%	0.0%	0.1%
No Passing	36	42	1	7	0	86
	1.1%	1.1%	0.0%	0.2%	0.0%	0.5%
Other Regulatory Sign	4	3	2	3	5	17
	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%
Other Warning Sign	4	4	3	3	11	25
	0.1%	0.1%	0.1%	0.1%	0.4%	0.1%
Lane Use Marking	17	18	17	12	21	85
	0.5%	0.5%	0.5%	0.3%	0.7%	0.5%
Other	35	41	45	33	31	185
	1.0%	1.1%	1.2%	0.9%	1.0%	1.1%
Delineators (2008)	0	0	0	0	1	1
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unknown	88	97	134	134	119	572
	2.6%	2.6%	3.6%	3.8%	3.8%	3.3%
Total	3,406	3,781	3,686	3,484	3,138	17,495
(Year %)	(19.5%)	(21.6%)	(21.1%)	(19.9%)	(17.9%)	100.0%

Without pedestrian exposure data, it is difficult to determine if the crashes occurring at each traffic control type are proportional to the pedestrian volumes at each type. However, traffic signals are common along larger streets and streets with more activity, such as commercial land uses, and therefore it is likely that intersections with traffic signals have higher pedestrian volumes and exposure than intersections with stop signs.

Table 32 displays the breakdown of only intersection-related crashes by the type of traffic control. This table reveals that 41.7% occurred at traffic signals, 13.6% at stop signs, flashers or yield signs, and 38.6% at uncontrolled locations. These data show that intersection-related crashes were most common at traffic signals, and that a slightly smaller proportion occurred at uncontrolled intersections. The percentage of fatal and serious injury crashes at uncontrolled locations was higher than for overall crashes.

Table 32: Intersection-Related Pedestrian Crashes by Traffic Control

	2005	2006	2007	2008	2009	Total
All Crashes						
Signalized	1,104	1,103	1,198	1,182	1,080	5,667
	41.3%	38.2%	41.9%	43.5%	44.1%	41.7%
No Controls	1,100	1,171	1,100	984	897	5,252
	41.2%	40.5%	38.4%	36.2%	36.6%	38.6%
Stop Sign / Flasher or Yield	317	435	386	387	328	1,853
	11.9%	15.1%	13.5%	14.2%	13.4%	13.4%
Other	77	107	67	62	52	365
	2.9%	3.7%	2.3%	2.3%	2.1%	2.7%
Unknown / Missing Data	73	74	111	105	94	457
	2.7%	2.6%	3.9%	3.9%	3.8%	3.4%
Total	2,671	2,890	2,862	2,720	2,451	13,594
(Year %)	(19.6%)	(21.3%)	(21.1%)	(20.0%)	(18.0%)	100.0%
Fatal and Serious Injury Crashes						
Signalized	213	188	179	151	167	898
	40.8%	38.4%	41.9%	38.6%	41.7%	40.3%
No Controls	239	210	166	170	148	933
	45.8%	42.9%	38.9%	43.5%	36.9%	41.8%
Stop Sign / Flasher or Yield	47	68	57	52	58	282
	9.0%	13.9%	13.4%	13.3%	14.5%	12.6%
Other	12	16	11	9	11	59
	2.3%	3.3%	2.6%	2.3%	2.7%	2.6%
Unknown / Missing Data	11	8	14	9	17	59
	2.1%	1.6%	3.3%	2.3%	4.2%	2.6%
Total	522	490	427	391	401	2,231
(Year %)	(23.4%)	(22.0%)	(19.1%)	(17.5%)	(18.0%)	100.0%

7.6 Vehicle Type and Use

Vehicle type and vehicle use data were derived from the vehicle files and represent all vehicles involved in crashes in which a pedestrian was struck. 84.8% of vehicles involved in pedestrian crashes were passenger cars, van/minivans, or sport utility vehicles. Crash involvement of buses and trucks was relatively low, accounting for only 7.9% of pedestrian crashes. **Table 33** shows these data. Nationally, buses account for roughly 1.5% and trucks account for roughly 46% of fatal pedestrian crashes.

Table 33: Pedestrian Crashes by Vehicle Type

	2005	2006	2007	2008	2009	Total
Passenger Car	2,468	2,709	2,545	2,378	2,138	12,238
	71.4%	70.7%	67.9%	67.5%	67.1%	68.9%
Van/Minivan	285	312	291	300	281	1,469
	8.2%	8.1%	7.8%	8.5%	8.8%	8.3%
Sport Utility Vehicle (SUV)	187	265	293	263	265	1,273
	5.4%	6.9%	7.8%	7.5%	8.3%	7.2%
Pickup Truck	116	122	164	110	122	634
	3.4%	3.2%	4.4%	3.1%	3.8%	3.6%
Bus over 15 Passengers	79	75	84	91	63	392
	2.3%	2.0%	2.2%	2.6%	2.0%	2.2%
Truck-Single Unit	40	54	44	48	43	229
	1.2%	1.4%	1.2%	1.4%	1.3%	1.3%
Tractor w/Semi-trailer	14	18	18	18	14	82
	0.4%	0.5%	0.5%	0.5%	0.4%	0.5%
Bus up to 15 Passengers	4	15	13	7	7	46
	0.1%	0.4%	0.3%	0.2%	0.2%	0.3%
Motorcycle	3	8	9	14	9	43
	0.1%	0.2%	0.2%	0.4%	0.3%	0.2%
Tractor w/o Semi-trailer	3	1	4	1	3	12
	0.1%	0.0%	0.1%	0.0%	0.1%	0.1%
Motor Driven Cycle	7	4	1	8	5	25
	0.2%	0.1%	0.0%	0.2%	0.2%	0.1%
All-terrain Vehicle (ATV)	1	3	0	1	1	6
	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%
Other Vehicle with Trailer	1	1	1	2	0	5
	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
Farm Equipment	0	0	0	1	0	1
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other	74	62	87	90	66	379
	2.1%	1.6%	2.3%	2.6%	2.1%	2.1%
Unknown/NA	175	185	195	192	171	918
	5.1%	4.8%	5.2%	5.4%	5.4%	5.2%
Total	3,457	3,834	3,749	3,524	3,188	17,752

Vehicle type does not give an indication of whether the vehicle is a private vehicle, a taxi, or others. Therefore, the crashes were also considered by vehicle use (see **Table 34**). Personal use accounted for 63.1% of the crashes, however 20.3% of the crashes involved unknown vehicle

uses. With such a high percentage of unknown, it is difficult to draw any conclusions from these data. Among the known vehicles, personal use accounted for 79.3% of the crashes and taxis accounted for the second largest percentage, at 6.7%. This is lower than the proportion of taxi involvement found in the NYC Study, where taxis were involved in 13.5% of crashes.

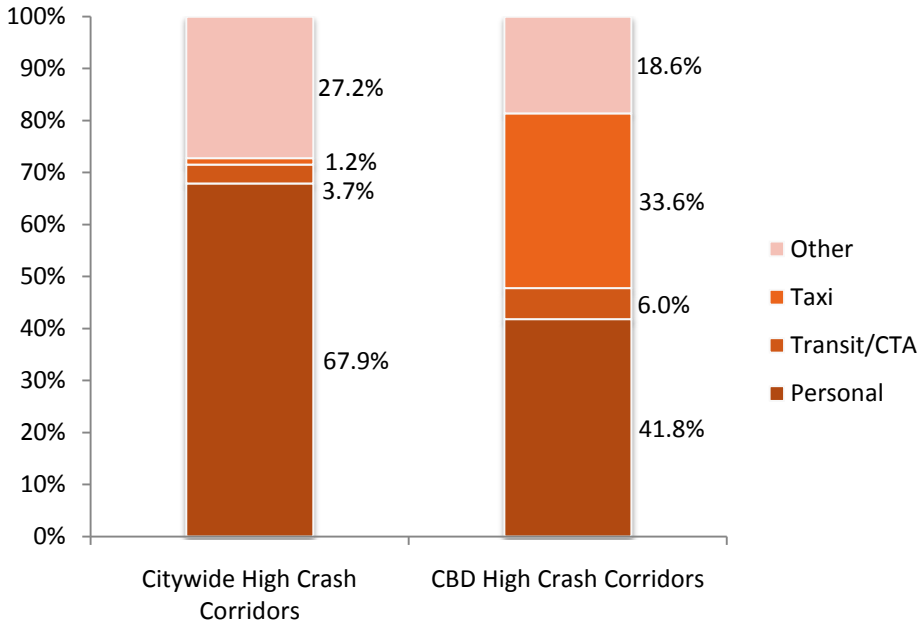
These data show that construction and maintenance vehicles accounted for 0.6% of the crashes. Similarly, pedestrians struck in work-zone related crashes amounted to 1.0% of crashes, which is substantially higher than the nationwide statistic of 0.2%.

Table 34: Pedestrian Crashes by Vehicle Use

	2005	2006	2007	2008	2009	Total
Personal	2,232	2,442	2,409	2,154	1,975	11,212
	64.5%	63.7%	64.3%	61.1%	62.0%	63.1%
Taxi/For Hire	159	180	201	207	196	943
	4.6%	4.7%	5.4%	5.9%	6.1%	5.3%
Not in Use	103	125	102	100	105	535
	3.0%	3.3%	2.7%	2.8%	3.3%	3.0%
	52	76	70	66	53	317
Chicago Transit Authority	1.5%	2.0%	1.9%	1.9%	1.7%	1.8%
Police	37	29	27	24	32	149
	1.1%	0.8%	0.7%	0.7%	1.0%	0.8%
Commercial- Single Unit	27	40	24	26	16	133
	0.8%	1.0%	0.6%	0.7%	0.5%	0.7%
Construction/Maintenance	28	15	20	19	28	110
	0.8%	0.4%	0.5%	0.5%	0.9%	0.6%
Other Transit	11	12	24	25	19	91
	0.3%	0.3%	0.6%	0.7%	0.6%	0.5%
Commercial- Multi-unit	8	13	9	16	11	57
	0.2%	0.3%	0.2%	0.5%	0.3%	0.3%
Mass Transit	15	7	21	7	3	53
	0.4%	0.2%	0.6%	0.2%	0.1%	0.3%
School Bus	13	6	12	9	5	45
	0.4%	0.2%	0.3%	0.3%	0.2%	0.3%
Tow Truck	10	5	6	9	14	44
	0.3%	0.1%	0.2%	0.3%	0.4%	0.2%
State-owned	3	3	1	0	5	12
	0.1%	0.1%	0.0%	0.0%	0.2%	0.1%
Ambulance	4	2	3	1	1	11
	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%
Driver Education	4	2	1	2	1	10
	0.1%	0.1%	0.0%	0.1%	0.0%	0.1%
Fire	0	3	0	2	1	6
	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%
Other	86	80	94	85	72	414
	2.5%	2.1%	2.5%	2.4%	2.3%	2.3%
Unknown/NA	669	794	725	772	651	3,611
	19.3%	20.7%	19.3%	21.9%	20.4%	20.3%
Total	3,461	3,834	3,749	3,524	3,188	17,756

Comparing the vehicle use in the high crash corridors identified in the CBD and citywide indicates that there was significantly more taxi involvement in crashes in the CBD. **Figure 27** shows that 33.6% of the crashes along the high crash corridors in the CBD involved taxis, as compared to 1.2% along the high crash corridors outside the CBD and compared to 5.3% of all crashes during this time period citywide. The overall split of vehicle type is not known, so it is difficult to determine if taxis are overrepresented among crashes in the CBD.

Figure 27: Vehicle Use in Crashes in High Crash Corridors (2005-2009)



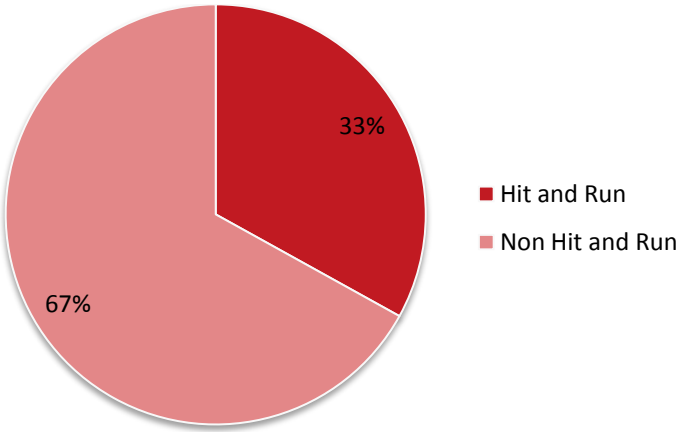
8 BEHAVIORAL

The crash reports were analyzed to identify behaviors contributing to pedestrian crashes. The analyses also attempted to identify contributing factors to the crash. Hit and run crashes, motorist physical condition, pedestrian visibility and motorist and pedestrian actions and locations were analyzed for all crashes and for fatal and serious injury crashes.

8.1 Hit and Run Crashes

Between 2005 and 2009, 5,534 pedestrian crashes involved hit and run drivers. This amounts to one-third of all pedestrian crashes over that time period, as shown in **Figure 28**. This is consistent with the results from the 2001-2005 Study.

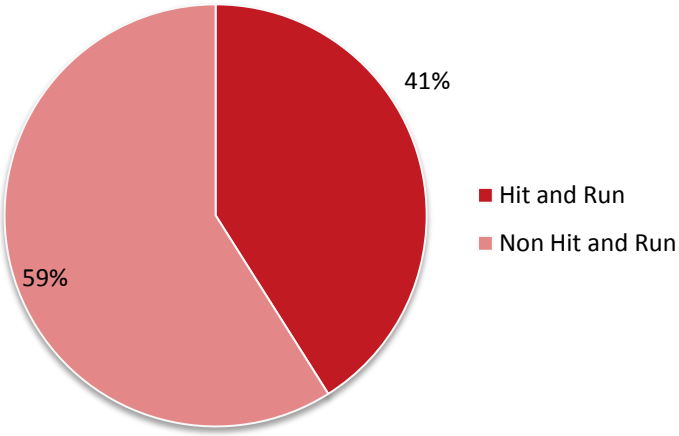
Figure 28: Percentage of Hit and Run Pedestrian Crashes (2005-2009)



Over the five years, hit and run crashes amounted to 3,683 pedestrian fatalities and injuries, an average of 2 per day. This includes pedestrian fatalities and injuries coded as incapacitating injuries (A) and non-incapacitating injuries (B).

Hit and run crashes accounted for 41% of the pedestrian fatalities (see **Figure 29**). By comparison, hit and run crashes accounted for 21.5% of pedestrian fatalities in New York City and nationally account for roughly 20% of pedestrian fatalities[11].

Figure 29: Percentage of Hit and Run among Fatal Pedestrian Crashes (2005-2009)



[11] National Highway Traffic Safety Administration, "National Pedestrian Crash Report," US Department of Transportation, June 2008.

Community areas and wards with the highest incidence of hit and run crashes during the five-year period are listed in **Table 35** and **Table 36**.

Table 35: Chicago Community Areas with Top Hit and Run Pedestrian Crashes (2005-2009)

Community Area		Hit and Run Crashes
25	Austin	404
8	Near North Side	228
23	Humboldt Park	204
32	Loop	193
67	West Englewood	176
24	West Town	167
68	Englewood	162
28	Near West Side	160
22	Logan Square	158
19	Belmont Cragin	155
30	South Lawndale	155

Table 36: Wards with Top Hit and Run Pedestrian Crashes (2005-2009)

Ward	Hit and Run Crashes
28	347
42	310
2	237
24	234
17	216
27	207
6	198
20	159
37	154
16	150

8.2 Speed

The speed of a motor vehicle at the time of the crash was not available in the crash data. However, average weekday speed data along selected roadways were provided by CDOT. The rates of fatal and serious injury pedestrian crashes to all pedestrian crashes along these streets were calculated and compared to the average speed. These findings are listed on the next page in **Table 37** and reveal that pedestrians struck by vehicles at less than 19 mph are significantly less likely to be killed or seriously injured. As the average speed increased, the fatal and serious injury rate also increased.

Table 37: Fatal (K) and Serious Injury (A) Rates (2005-2009) by Average Speed

Speed (mph)	Total crashes	K&A crashes	K&A rate
10-19	971	133	13.7%
20-24	3,731	677	18.1%
25-29	3,212	601	18.7%
30-34	428	87	20.3%
35+	53	12	22.6%

8.3 Motorist Physical Condition

Table 38 shows apparent physical condition of motorists that struck pedestrians between 2005 and 2009. These data show that less than 1% of drivers involved in all crashes were alcohol impaired or had been drinking. One caveat to concluding that alcohol was not a major factor in crashes is the high proportion of hit and run crashes in Chicago. It is possible that drivers who had been drinking would be more likely to flee the scene of a crash than those who had not been drinking.

These data also indicate that the physical condition of nearly 36% of the motorists was "other/unknown."

Table 38: Motorist Apparent Physical Condition

	2005	2006	2007	2008	2009	Total
Normal	2,154	2,342	2,387	2,185	1,991	11,059
	63.3%	62.1%	64.8%	62.7%	63.6%	63.3%
Alcohol Impaired	27	23	21	16	27	114
	0.8%	0.6%	0.6%	0.5%	0.9%	0.7%
Had Been Drinking	6	7	4	4	7	28
	0.2%	0.2%	0.1%	0.1%	0.2%	0.2%
Drug Impaired	1	2	6	3	4	16
	0.0%	0.1%	0.2%	0.1%	0.1%	0.1%
Fatigued	3	1	0	4	3	11
	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%
Illness	2	0	3	0	3	8
	0.1%	0.0%	0.1%	0.0%	0.1%	0.0%
Asleep/Fainted	2	1	1	1	1	6
	0.4%	0.2%	0.2%	0.2%	0.2%	0.0%
Medicated	0	0	0	1	0	1
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other/Unknown	1,210	1,397	1,261	1,269	1,093	6,230
	35.5%	37.0%	34.2%	36.4%	34.9%	35.7%
Total	3,405	3,773	3,683	3,483	3,129	17,473
(Year %)	(19.5%)	(21.6%)	(21.1%)	(19.9%)	(17.9%)	100.0%

Table 39 shows the motorist's physical condition for fatal and serious injury crashes. These data show a slightly higher percentage of the motorists were under normal condition and 1.9% were alcohol impaired or had been drinking. Again, these data show a large proportion of other/unknown physical condition. Therefore, it is difficult to determine the true breakdown of motorist condition.

Table 39: Motorist Apparent Physical Condition in Fatal and Serious Injury Pedestrian Crashes

	2005	2006	2007	2008	2009	Total
Normal	424	420	386	340	348	1,918
	63.3%	64.5%	68.3%	68.4%	67.4%	66.2%
Alcohol Impaired	13	8	7	7	10	45
	1.9%	1.2%	1.2%	1.4%	1.9%	1.6%
	2	1	2	2	3	10
Had Been Drinking	0.3%	0.2%	0.4%	0.4%	0.6%	0.3%
Drug Impaired	0	1	2	3	1	7
	0.0%	1.8%	3.6%	5.4%	1.8%	0.2%
Asleep/Fainted	0	1	0	0	0	1
	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%
Fatigued	0	0	0	0	0	0
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Illness	0	0	1	0	0	1
	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%
Medicated	0	0	0	1	0	1
	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%
Other/Unknown	231	220	167	144	154	916
	34.5%	33.8%	29.6%	29.0%	29.8%	31.6%
Total	670	651	565	497	516	2,899
(Year %)	(23.1%)	(22.5%)	(19.5%)	(17.1%)	(17.8%)	100.0%

8.4 Pedestrian Conspicuity

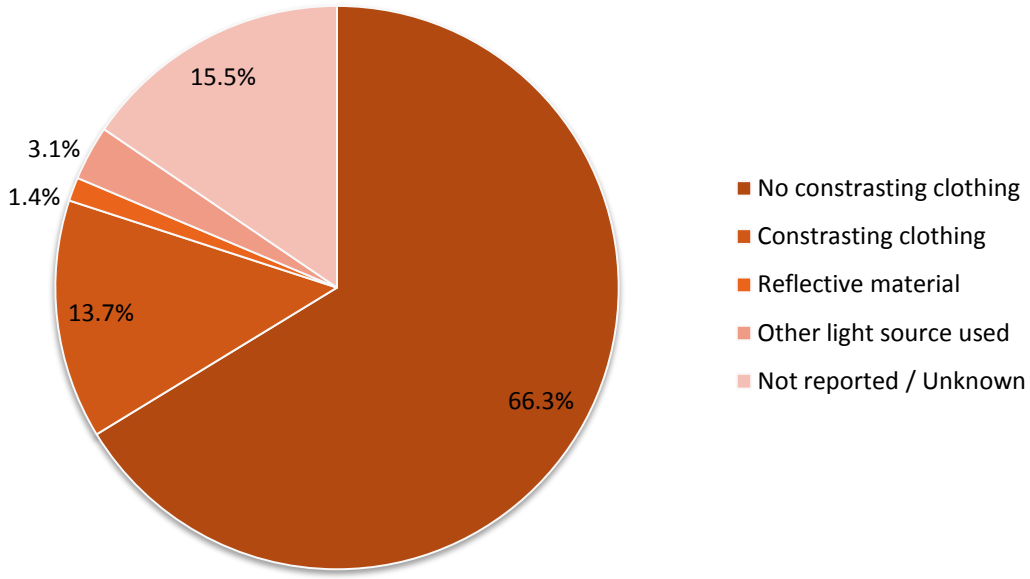
Table 40 shows the pedestrian crashes by the visibility of the pedestrian. These data show that 61.5% of pedestrians were not reported as wearing contrasting clothing.

Table 40: Pedestrian Crashes by Pedestrian Conspicuity

	2005	2006	2007	2008	2009	Total
No Constrasting Clothing	2,022 56.3%	2,419 61.0%	2,401 62.0%	2,310 62.9%	2,147 65.5%	11,299 61.5%
Constrasting Cloth-ing	666 18.5%	603 15.2%	623 16.1%	600 16.3%	550 16.8%	3,042 16.6%
Reflective Material	49 1.4%	71 1.8%	68 1.8%	68 1.9%	61 1.9%	317 1.7%
Other Light Source used	118 3.3%	131 3.3%	130 3.4%	133 3.6%	107 3.3%	619 3.4%
Not Reported/ Unknown	737 20.5%	743 18.7%	648 16.7%	559 15.2%	412 12.6%	3,099 16.9%
Total (Year %)	3,592 (19.5%)	3,967 (21.6%)	3,870 (21.1%)	3,670 (20.0%)	3,277 (17.8%)	18,376 100.0%

Figure 30 shows these data for crashes that occurred in dark conditions. This includes crashes that were recorded as having occurred under light conditions of "darkness" or "darkness, lighted road." These data indicate that only a small percentage of pedestrians struck were reported as wearing reflective material (1.4%) or were carrying a light source (3.1%). The use of these materials has been shown to increase a pedestrian's visibility.

Figure 30: Pedestrian Crashes (2005-2009) by Pedestrian Conspicuity in Dark Conditions



8.5 Vehicle Maneuvers

Table 41 provides data on crashes by vehicle maneuver. These data show that just over 25% of crashes involved a turning maneuver, slightly less than 50% involved a straight ahead maneuver, and 5% a backing maneuver. Left-turning motorists hit twice as many pedestrians as right-turning motorists. Very few crashes involved a motorist turning right on red.

The proportion of vehicles going straight ahead at the time of a crash decreased over the five-year period and from the 2001-2005 Study, when these maneuvers accounted for 60% of the crashes. Meanwhile, the proportions of vehicles turning left and turning right have increased since the previous study.

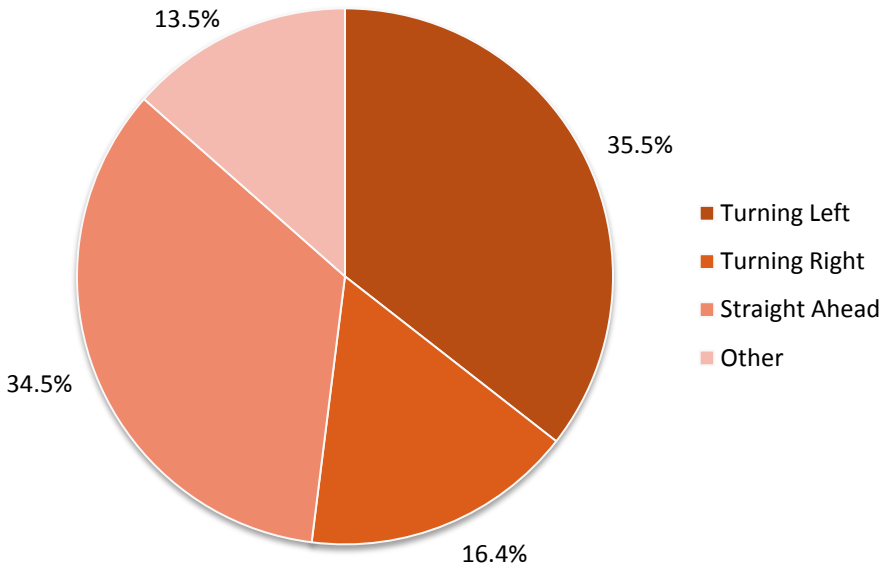
Table 41: Pedestrian Crashes by Vehicle Maneuver

	2005	2006	2007	2008	2009	Total
Straight Ahead	1,775	2,030	1,882	1,655	1,506	8,848
	51.3%	52.9%	50.2%	47.0%	47.2%	49.8%
Turning Left	545	596	630	594	562	2,927
	15.7%	15.5%	16.8%	16.9%	17.6%	16.5%
Unknown/NA	280	283	309	296	221	1,389
	8.1%	7.4%	8.2%	8.4%	6.9%	7.8%
Turning Right	267	267	296	301	235	1,366
	7.7%	7.0%	7.9%	8.5%	7.4%	7.7%
Backing	154	169	167	186	155	831
	4.4%	4.4%	4.5%	5.3%	4.9%	4.7%
Other	67	72	75	68	71	353
	1.9%	1.9%	2.0%	1.9%	2.2%	2.0%
Slow/Stop in traffic	64	72	62	71	63	332
	1.8%	1.9%	1.7%	2.0%	2.0%	1.9%
Slow/Stop left turn	49	67	51	83	81	331
	1.4%	1.7%	1.4%	2.4%	2.5%	1.9%
Passing/Overtaking	46	46	44	34	38	208
	1.3%	1.2%	1.2%	1.0%	1.2%	1.2%
Starting in Traffic	41	28	38	43	37	187
	1.2%	0.7%	1.0%	1.2%	1.2%	1.1%
Slow/Stop Right Turn	22	36	16	38	48	160
	0.6%	0.9%	0.4%	1.1%	1.5%	0.9%
Slow/Stop Load-Unload	25	32	30	22	36	145
	0.7%	0.8%	0.8%	0.6%	1.1%	0.8%
Skidding/Control Loss	25	18	29	21	29	122
	0.7%	0.5%	0.8%	0.6%	0.9%	0.7%
Avoiding Vehicles/Objects	22	23	25	14	17	101
	0.6%	0.6%	0.7%	0.4%	0.5%	0.6%
Enter from Drive/Alley	21	17	16	26	17	97
	0.6%	0.4%	0.4%	0.7%	0.5%	0.5%
Entering Traffic Lane from Parking	19	15	18	21	19	92
	0.5%	0.4%	0.5%	0.6%	0.6%	0.5%
Changing Lanes	11	17	7	10	12	57
	0.3%	0.4%	0.2%	0.3%	0.4%	0.3%

	2005	2006	2007	2008	2009	Total
Driving Wrong Way	8	8	14	10	12	52
	0.2%	0.2%	0.4%	0.3%	0.4%	0.3%
U-turn	3	5	11	5	7	31
	0.1%	0.1%	0.3%	0.1%	0.2%	0.2%
Leaving Traffic Lane to Park	2	7	10	6	5	30
	0.1%	0.2%	0.3%	0.2%	0.2%	0.2%
Parked	3	8	5	7	5	28
	0.1%	0.2%	0.1%	0.2%	0.2%	0.2%
Turning on Red	4	10	3	6	4	27
	0.1%	0.3%	0.1%	0.2%	0.1%	0.2%
Merging	4	1	4	2	2	13
	0.1%	0.0%	0.1%	0.1%	0.1%	0.1%
Parked in Traffic Lane	4	3	4	2	0	13
	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%
Driverless	1	4	2	2	1	10
	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%
Negotiating a Curve	0	0	0	1	4	5
	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
Diverging	0	0	1	0	1	2
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	3,462	3,834	3,749	3,524	3,188	17,757
(Year %)	(19.5%)	(21.6%)	(21.1%)	(19.8%)	(18.0%)	100.0%

Figure 31 displays an analysis of turning maneuvers in pedestrian crashes that occurred at signalized intersections. Left-turning vehicles were involved in 35.5% of crashes and right-turning vehicles in 16.4%, for a total of just over 50% of crashes involving turns. Vehicles going straight were involved in 34.5% of the crashes and the remaining 13.5% involved other or unknown actions. Again, these proportions of turning vehicles are higher than the 2001-2005 Study.

Figure 31: Vehicle Maneuvers at Signalized Intersection Pedestrian Crashes (2005-2009)



In an analysis of turning vehicles involved in crashes in the high crash corridors in the CBD compared to the high crash corridors outside the CBD, the CBD crashes were found to have a higher proportion of crashes (65.6%) involving turning vehicles. 48.3% of the crashes involved left turns in the CBD versus 31.9% outside of the CBD. Right turning vehicles accounted for 17.3% and 16.2% of the crashes inside and outside the CBD, respectively.

8.6 Motorist Action

Table 42 shows pedestrian crashes by motorist action. "Failure to yield" to pedestrians was the most common action cited as a contributing factor. It accounted for 36.4% of all crashes. Similar to other analyses, the category of unknown has a high proportion, likely due to the high rate of hit and run crashes. When accounting for only the known factors, motorists' failure to yield to pedestrians accounts for 48.3% of all crashes.

Table 42: Motorist Action

	2005	2006	2007	2008	2009	Total
Failed to Yield	1,238	1,296	1,325	1,287	1,207	6,353
	36.4%	34.3%	36.0%	37.0%	38.6%	36.4%
None	637	882	762	657	553	3,491
	18.7%	23.4%	20.7%	18.9%	17.7%	20.0%
Improper Backing	103	75	68	73	62	381
	3.0%	2.0%	1.8%	2.1%	2.0%	2.2%
Too Fast for Conditions	64	66	60	47	64	301
	1.9%	1.7%	1.6%	1.3%	2.0%	1.7%
Disregarded Control Devices	47	65	56	57	47	272
	1.4%	1.7%	1.5%	1.6%	1.5%	1.6%
Improper Turn	20	29	25	33	16	123
	0.6%	0.8%	0.7%	0.9%	0.5%	0.7%
Improper Passing	13	15	21	13	12	74
	0.4%	0.4%	0.6%	0.4%	0.4%	0.4%
Wrong Way/Side	5	11	11	9	9	45
	0.1%	0.3%	0.3%	0.3%	0.3%	0.3%
Followed too Closely	5	4	6	7	6	28
	0.1%	0.1%	0.2%	0.2%	0.2%	0.2%
Improper Lane Change	12	8	7	5	11	43
	0.4%	0.2%	0.2%	0.1%	0.4%	0.2%
Emergency Vehicle on Call	8	3	1	3	6	21
	0.2%	0.1%	0.0%	0.1%	0.2%	0.1%
Improper Parking	6	4	1	4	5	20
	1.1%	0.7%	0.2%	0.7%	0.9%	0.1%
Evading Police Vehicle	1	6	4	3	4	18
	0.0%	0.2%	0.1%	0.1%	0.1%	0.1%
Stopped School Bus	4	2	2	0	2	10
	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%
License Restrictions	1	3	1	1	0	6
	1.8%	5.4%	1.8%	1.8%	0.0%	0.0%

	2005	2006	2007	2008	2009	Total
Other	417	395	416	374	364	1,966
	12.2%	10.5%	11.3%	10.7%	11.6%	11.3%
Unknown	824	910	917	910	761	4,322
	24.2%	24.1%	24.9%	26.1%	24.3%	24.7%
Total	3,405	3,774	3,683	3,483	3,129	17,474
(Year %)	(19.5%)	(21.6%)	(21.1%)	(19.9%)	(17.9%)	100.0%

Table 43 on the following page shows the motorist actions in fatal and serious injury crashes, with similar results. “Failure to yield” accounted for 37.5% of the crashes, but when excluding the crashes where the motorist action was unknown, failure to yield increased to 47.6% of the crashes. The next most common motorist action was “none,” at 19.9%, followed by “too fast for conditions,” at 3.0%. The proportion of the “too fast for conditions” action was nearly double for the fatal and serious injury crashes, as compared to all pedestrian crashes.

Table 43: Motorist Action in Fatal and Serious Injury Pedestrian Crashes

	2005	2006	2007	2008	2009	Total
Failed to Yield	247 36.9%	232 35.6%	212 37.5%	176 35.5%	219 42.4%	1,086 37.5%
None	126 18.8%	151 23.2%	107 18.9%	105 21.2%	88 17.1%	577 19.9%
Too Fast for Conditions	23 3.4%	21 3.2%	16 2.8%	13 2.6%	14 2.7%	87 3.0%
Disregarded Control Devices	18 2.7%	14 2.2%	16 2.8%	11 2.2%	7 1.4%	66 2.3%
Improper Backing	19 2.8%	5 0.8%	10 1.8%	12 2.4%	10 1.9%	56 1.9%
Improper Turn	5 0.7%	4 0.6%	5 0.9%	8 1.6%	2 0.4%	24 0.8%
Wrong Way/Side	2 0.3%	3 0.5%	4 0.7%	2 0.4%	2 0.4%	13 0.4%
Improper Passing	2 0.3%	1 0.2%	3 0.5%	2 0.4%	1 0.2%	9 0.3%
Improper Lane Change	3 0.4%	1 0.2%	1 0.2%	1 0.2%	2 0.4%	8 0.3%
Followed Too Closely	1 0.1%	0 0.0%	2 0.4%	2 0.4%	1 0.2%	6 0.2%
Improper Parking	1 0.2%	0 0.0%	1 0.2%	2 0.4%	1 0.2%	5 0.2%
Evading Police Vehicle	0 0.0%	2 0.3%	2 0.4%	0 0.0%	0 0.0%	4 0.1%
Stopped School Bus	1 0.1%	1 0.2%	1 0.2%	0 0.0%	0 0.0%	3 0.1%
Emergency Vehicle on Call	1 0.1%	1 0.2%	0 0.0%	0 0.0%	1 0.2%	3 0.1%
License Restrictions	1 1.8%	1 1.8%	0 0.0%	0 0.0%	0 0.0%	2 0.1%
Other	81 12.1%	63 9.7%	70 12.4%	54 10.9%	63 12.2%	331 11.4%
Unknown	139 20.7%	151 23.2%	115 20.4%	108 21.8%	105 20.3%	618 21.3%
Total (Year %)	670 (23.1%)	651 (22.5%)	565 (19.5%)	496 (17.1%)	516 (17.8%)	2,898 100.0%

8.7 Pedestrian Location

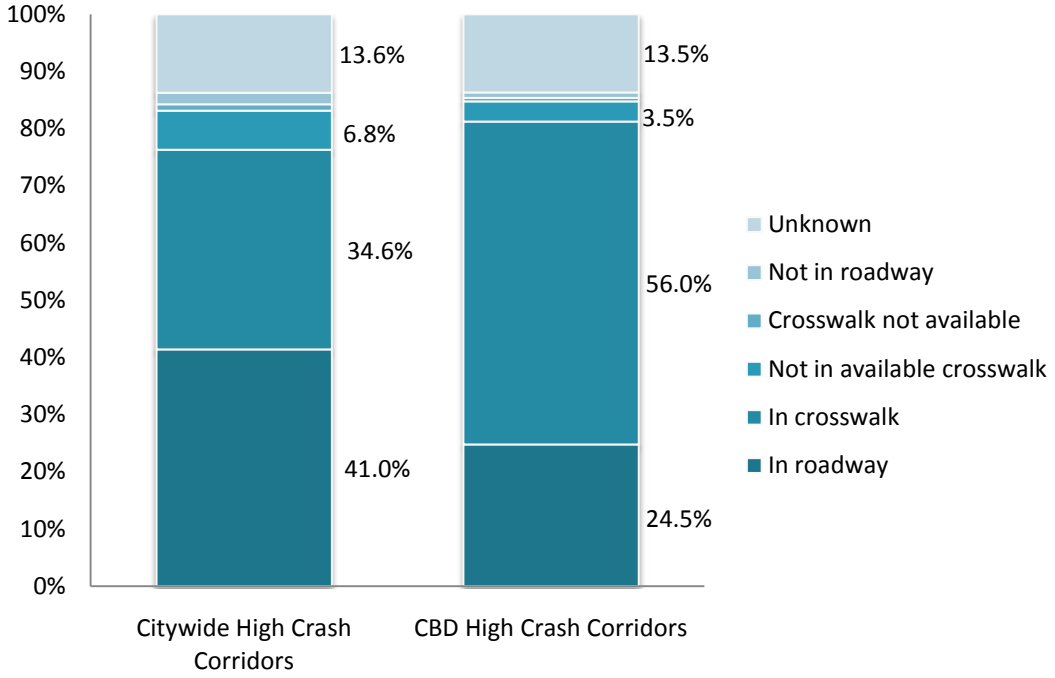
Table 44 shows that 42.9% of pedestrians were struck "In roadway." Thirty-two percent of pedestrian crashes occurred in crosswalks with left and right turns accounting for 25%. The 2001-2005 Study indicated that 54.8% of pedestrians were in the roadway at the time of the crash, representing a large drop between the two studies; however, the percent of pedestrians in the crosswalk was consistent.

Table 44: Pedestrian Crashes by Location of Pedestrian

	2005	2006	2007	2008	2009	Total
In Roadway	1,488	1,750	1,738	1,552	1,349	7,877
	41.4%	44.1%	44.9%	42.3%	41.2%	42.9%
In Crosswalk	1,039	1,231	1,208	1,268	1,162	5,908
	28.9%	31.0%	31.2%	34.6%	35.5%	32.2%
Not in Available Cross-	195	187	157	160	172	871
walk	5.4%	4.7%	4.1%	4.4%	5.2%	4.7%
Crosswalk not Available	50	48	50	39	40	227
	1.4%	1.2%	1.3%	1.1%	1.2%	1.2%
Driveway Access	33	47	45	56	44	225
	0.9%	1.2%	1.2%	1.5%	1.3%	1.2%
Not in Roadway	107	158	124	124	123	636
	3.0%	4.0%	3.2%	3.4%	3.8%	3.5%
Bikeway	0	0	1	0	4	5
	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
Unknown/NA/	680	546	547	471	383	2,627
Missing Data	18.9%	13.8%	14.1%	12.8%	11.7%	14.3%
Total	3,592	3,967	3,870	3,670	3,277	18,376
(Year %)	(19.6%)	(21.6%)	(21.1%)	(20.0%)	(17.8%)	100.0%

The location of pedestrians involved in crashes varied inside and outside the CBD. Pedestrian location was compared for crashes in the high crash corridors identified within the CBD and citywide. Pedestrians in the CBD corridors were much more likely to be in the crosswalk, at 56%, than pedestrians overall. The pedestrian locations in high crash corridors outside the CBD were similar to the citywide results. **Figure 32** on the next page shows these results.

Figure 32: Pedestrian Location in Crashes in High Crash Corridors (2005-2009)



A breakdown by age indicates that pedestrians 60 and over were more likely to be struck in a crosswalk and less likely to be struck in the roadway. These data also show that children aged 0 to 14 were more likely to be struck in the roadway and less likely to be struck in a crosswalk. **Figure 33** displays these data. Similar results were found in the 2001-2005 Study.

Figure 33: Pedestrian Crashes (2005-2009) by Pedestrian Location and Age Group

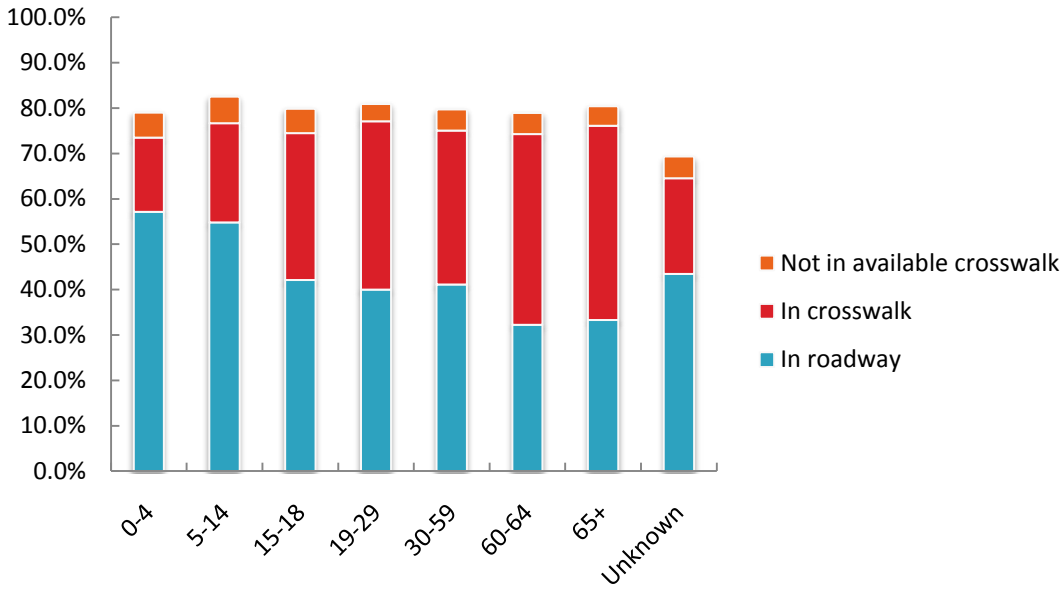


Table 45 shows the pedestrian location data broken down by whether the crash was intersection-related. This indicates that the majority of pedestrians who were struck in a crosswalk were at an intersection. Pedestrians were also more likely to be in the roadway in non-intersection related crashes.

Table 45: Pedestrian Location by Intersection-Related Crash (2005-2009)

	Intersection-Related	Not Intersection-Related	Total
In Roadway	5,147 37.9%	2,730 57.1%	7,877 42.9%
In Crosswalk	5,472 40.3%	436 9.1%	5,908 32.2%
Not in Available Crosswalk	623 4.6%	248 5.2%	871 4.7%
Crosswalk not Available	169 1.2%	58 1.2%	227 1.2%
Driveway Access	114 0.8%	111 2.3%	225 1.2%
Not in Roadway	279 2.1%	357 7.5%	636 3.5%
Bikeway	4 0.0%	1 0.0%	5 0.0%
Unknown	1,786 13.1%	841 17.6%	2,627 14.3%
Total	13,594 74.0%	4,782 26.0%	18,376 100.0%

8.8 Pedestrian Action

Table 46 on the following page shows the breakdown of pedestrian action prior to a crash for all crashes. These data indicate that 23.3% of pedestrians were struck while crossing with the signal and 8.4% were struck while crossing against the signal. While the percentage of pedestrians crossing with the signal is similar to that found in the 2001-2005 Study, the percentage of pedestrians crossing against the signal has declined. In the previous report, it was found to be 13.4%.

Table 46: Pedestrian Action Prior to Crash

	2005	2006	2007	2008	2009	Total
Crossing With Signal	712	899	918	915	795	4,239
	20.7%	22.7%	23.7%	24.9%	24.3%	23.3%
Other	629	745	746	687	590	3,397
	18.3%	18.8%	19.3%	18.7%	18.0%	18.6%
Crossing Against Signal	309	325	315	304	271	1,524
	9.0%	8.2%	8.1%	8.3%	8.3%	8.4%
Standing in Roadway	234	242	224	213	181	1,094
	6.8%	6.1%	5.8%	5.8%	5.5%	6.0%
Entering/Leaving/Crossing Unspecified Location	212	250	219	202	210	1,093
	6.2%	6.3%	5.7%	5.5%	6.4%	6.0%
Walking/Riding with Traffic	199	236	245	231	173	1,084
	5.8%	5.9%	6.3%	6.3%	5.3%	5.9%
Walking Riding Against Traffic	180	225	247	184	161	997
	5.2%	5.7%	6.4%	5.0%	4.9%	5.5%
Playing in Roadway	123	137	118	81	61	520
	3.6%	3.5%	3.0%	2.2%	1.9%	2.9%
None	62	97	66	77	75	377
	1.8%	2.4%	1.7%	2.1%	2.3%	2.1%
Working in Roadway	38	77	59	56	45	275
	1.1%	1.9%	1.5%	1.5%	1.4%	1.5%
Entering/Leaving/Crossing Vehicle	48	45	43	41	45	222
	1.4%	1.1%	1.1%	1.1%	1.4%	1.2%
Enter from Drive/Alley	36	52	34	41	36	199
	1.0%	1.3%	0.9%	1.1%	1.1%	1.1%
Turning Left	3	14	17	11	9	54
	0.1%	0.4%	0.4%	0.3%	0.3%	0.3%
Turning Right	8	7	13	8	11	47
	0.2%	0.2%	0.3%	0.2%	0.3%	0.3%
Playing/Working on Vehicle	17	8	6	5	7	43
	0.5%	0.2%	0.2%	0.1%	0.2%	0.2%
Intoxicating Ped/Pedal	0	0	0	0	41	41
	0.0%	0.0%	0.0%	0.0%	1.3%	0.2%
Waiting for Schoolbus	4	9	4	6	5	28
	0.1%	0.2%	0.1%	0.2%	0.2%	0.2%
Walking/Riding To/from Disabled Vehicle	3	0	6	7	4	20
	0.1%	0.0%	0.2%	0.2%	0.1%	0.1%
	4	3	4	1	3	15
Entering/Leaving/Crossing/Schoolbus	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%
Unknown	618	596	586	600	554	2,954
	17.9%	15.0%	15.1%	16.3%	16.9%	16.2%
Total	3,439	3,967	3,870	3,670	3,277	18,223
(Year %)	(18.9%)	(21.8%)	(21.2%)	(20.1%)	(18.0%)	100.0%

In looking at crashes specifically at signalized intersections, 48.8% of pedestrians were crossing with the signal while 16.4% were crossing against the signal. (See **Table 47**.) Within the CBD, pedestrians were more likely to be struck while crossing with the signal, at 58.7%, compared to 46% at signalized intersection crashes outside of the CBD. These findings support the pedestrian location results that pedestrians in the CBD were more likely to be in a crosswalk.

Table 47: Pedestrian Action at Signalized Intersection Pedestrian Crashes

	2005	2006	2007	2008	2009	Total
Crossing with Signal	523	566	628	639	565	2,921
	44.3%	48.4%	50.2%	51.3%	49.7%	48.8%
Crossing against signal	208	198	212	186	175	979
	17.6%	16.9%	16.9%	14.9%	15.4%	16.4%
Walking with traffic	71	71	79	69	59	349
	6.0%	6.1%	6.3%	5.5%	5.2%	5.8%
Other action	70	68	72	58	58	326
	5.9%	5.8%	5.8%	4.7%	5.1%	5.4%
Walking against traffic	41	38	56	44	37	216
	3.5%	3.3%	4.5%	3.5%	3.3%	3.6%
Standing in roadway	19	24	21	31	21	116
	1.6%	2.1%	1.7%	2.5%	1.8%	1.9%
Entering/leaving/crossing not at intersection	14	27	14	18	20	93
	1.2%	2.3%	1.1%	1.4%	1.8%	1.6%
Working in roadway	4	14	13	11	5	47
	0.3%	1.2%	1.0%	0.9%	0.4%	0.8%
No action	8	11	5	8	7	39
	0.7%	0.9%	0.4%	0.6%	0.6%	0.7%
Playing in roadway	10	1	8	5	4	28
	0.8%	0.1%	0.6%	0.4%	0.4%	0.5%
Turning left	1	6	7	4	5	23
	0.1%	0.5%	0.6%	0.3%	0.4%	0.4%
Turning right	3	2	6	4	6	21
	0.3%	0.2%	0.5%	0.3%	0.5%	0.4%
Entering/leaving/crossing parked vehicle	1	1	7	4	7	20
	0.1%	0.1%	0.6%	0.3%	0.6%	0.3%
Waiting for school bus	1	6	1	1	1	10
	0.1%	0.5%	0.1%	0.1%	0.1%	0.2%
Intoxicated pedestrian	0	0	0	0	4	4
	0.0%	0.0%	0.0%	0.0%	0.4%	0.1%
Enter from drive/alley	0	1	1	0	0	2
	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%

	2005	2006	2007	2008	2009	Total
Entering/leaving/crossing school bus	0 0.0%	1 0.1%	1 0.1%	0 0.0%	0 0.0%	2 0.0%
Playing/working on vehicle	0 0.0%	0 0.0%	0 0.0%	1 0.1%	1 0.1%	2 0.0%
Unknown/NA	167 14.2%	134 11.5%	121 9.7%	162 13.0%	161 14.2%	745 12.5%
Total (Year %)	1,180 (19.7%)	1,169 (19.5%)	1,252 (20.9%)	1,245 (20.8%)	1,136 (19.0%)	5,982 100.0%

Appendix C
Marketing Campaign Materials

The following pages show the print media marketing campaign materials that were used between 2011 and 2013 by the City of Chicago to promote pedestrian and motorist safety and awareness. The message, "It's Up To You. Be Alert. Be Safe. We're All Pedestrians." accompanies each media piece with similar fonts and warning sign imagery reminiscent of traffic warning signs.

Contents

Big Belly Posters

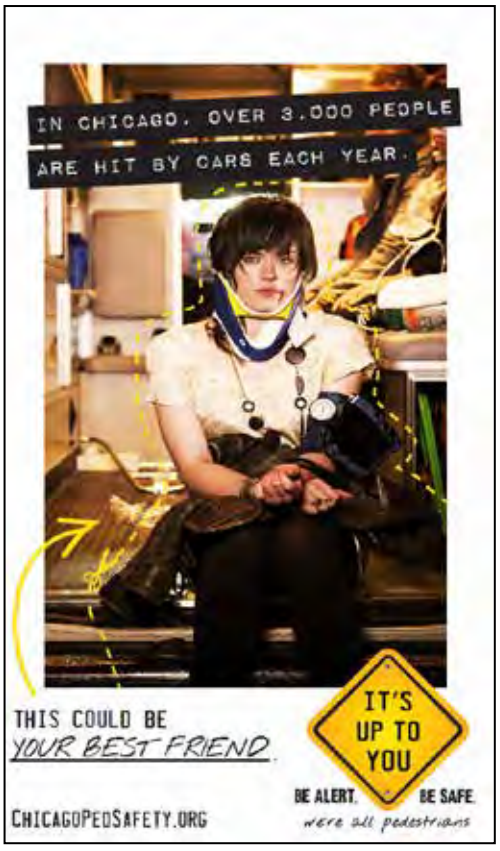

YOU CAN'T SEE WHAT
YOU'RE NOT LOOKING FOR
SEEING
PEDESTRIANS
MEANS SAVING
PEDESTRIANS.
STOP FOR PEDESTRIANS IN THE CROSSWALK.
IT'S THE LAW.
CHICAGOPEDSAFETY.ORG
IT'S
UP TO
YOU
BE ALERT.
BE SAFE.
were all pedestrians

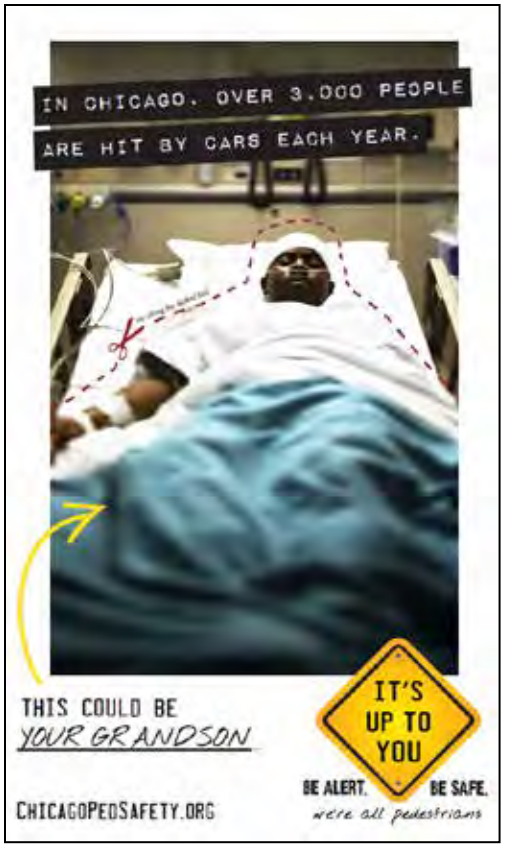

OVER HALF OF
PEDESTRIAN CRASHES
IN CHICAGO INVOLVE
A TURNING CAR.
STOP FOR PEDESTRIANS IN THE CROSSWALK.
IT'S THE LAW.
CHICAGOPEDSAFETY.ORG
IT'S UP TO YOU
BE ALERT. BE SAFE.
we're all pedestrians


THIS IS JUST THE BEGINNING.
ONE CRASH CAN CHANGE
TWO LIVES FOREVER.
STOP FOR PEDESTRIANS IN THE CROSSWALK.
IT'S THE LAW.
CHICAGOPEDSAFETY.ORG
IT'S UP TO YOU
BE ALERT. BE SAFE.
we're all pedestrians


THIS IS JUST THE BEGINNING.
BLOW A CROSSWALK.
HIT A CHILD.
YOUR LIVES WILL NEVER BE THE SAME.
IT'S UP TO YOU
BE ALERT. BE SAFE.
we're all pedestrians
CHICAGOPEDSAFETY.ORG


IN CHICAGO, OVER 3,000 PEOPLE
ARE HIT BY CARS EACH YEAR.
THIS COULD BE
YOUR BROTHER.
IT'S UP TO YOU
BE ALERT. BE SAFE.
we're all pedestrians
CHICAGOPEDSAFETY.ORG


IN CHICAGO, OVER 3,000 PEOPLE
ARE HIT BY CARS EACH YEAR.
THIS COULD BE
YOUR BEST FRIEND.
IT'S UP TO YOU
BE ALERT. BE SAFE.
we're all pedestrians
CHICAGOPEDSAFETY.ORG


IN CHICAGO, OVER 3,000 PEOPLE
ARE HIT BY CARS EACH YEAR.
THIS COULD BE
YOUR GRANDSON
IT'S UP TO YOU
BE ALERT. BE SAFE.
we're all pedestrians
CHICAGOPEDSAFETY.ORG


IN CHICAGO, OVER 3,000 PEOPLE
ARE HIT BY CARS EACH YEAR.
THIS COULD BE
YOUR DAUGHTER
IT'S UP TO YOU
BE ALERT. BE SAFE.
we're all pedestrians
CHICAGOPEDSAFETY.ORG


AN AVERAGE OF 50 PEDESTRIANS
ARE KILLED IN CHICAGO EACH
YEAR BY CARS.
THINK BEFORE YOU CROSS.
FOLLOW THE SIGNAL
AND USE A CROSSWALK.
IT'S UP TO YOU
BE ALERT. BE SAFE.
we're all pedestrians
CHICAGOPEDSAFETY.ORG

Bus Backs


66
30


THIS IS JUST THE BEGINNING.
BLOW A CROSSWALK.
HIT A CHILD.
YOUR LIVES WILL
NEVER BE THE SAME.
CHICAGOPEDSAFETY.ORG
IT'S UP TO YOU
BE ALERT. BE SAFE.
we're all pedestrians


THIS IS JUST THE BEGINNING.
ONE CRASH CAN CHANGE
TWO LIVES FOREVER.
STOP FOR PEDESTRIANS
IN THE CROSSWALK.
IT'S THE LAW.
CHICAGOPEDSAFETY.ORG
IT'S UP TO YOU
BE ALERT. BE SAFE.
we're all pedestrians


SPEED
LIMIT
30
YOU'RE TWICE AS LIKELY TO
KILL A PEDESTRIAN AT 40 MPH.
KEEP IT 30 OR LESS.
IT'S THE LAW.
CHICAGOPEDSAFETY.ORG
IT'S UP TO YOU
BE ALERT. BE SAFE.
we're all pedestrians

Taxi Bumper Stickers

Pedestrian Flags

Sidewalk Applications

Appendix D
Media Coverage Summary

The following pages contain links to media coverage from newspapers, television news outlets, and news websites regarding the Pedestrian Safety Campaign. Media coverage was documented by media outlet, communication medium (website, press release, etc.), in Table 1 on the following page. Screen shots of media coverage are provided after the table.

Contents

Summary Table

Media Outlet	Medium	Date	Author	Title	Source
ABC 7 News Chicago	Website	10/25/2011	Theresa Gutierrez	Dozens of Dummies have Message for Pedestrians	http://abclocal.go.com/wls/story?section=news/local&id=8405413
ABC 7 News Chicago	Website	10/26/2011		Mannequins Remind Pedestrians About Safety	http://abclocal.go.com/wls/story?section=news/local&id=8404794
A/N Blog	Website	10/26/2011	Alan G. Brake	White Mannequins are the New Ghost Bikes	http://blog.archpaper.com/wordpress/archives/26280?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+AN_blog+%28A%2FN+Blog%29
Bike Portland.org	Website	12/12/2011	Will Vanlue	The Monday Roundup	http://bikeportland.org/2011/12/12/the-monday-roundup-151-63534
Bikewalk Lincoln Park	Website	10/25/2011		Mannequins Occupy Wacker Drive	http://www.bikewalklincolnpark.com/2011/10/mannequins-occupy-wacker-drive.html
CBS 2 Chicago	Website	10/25/2011	CBS	Mannequins Set Up in Memory of Crash Victims	http://chicago.cbslocal.com/2011/10/25/mannequins-set-up-in-memory-of-pedestrian-crash-victims/
CBS 2 Chicago	Website	12/9/2011	CBS	City Hopes for Better Pedestrian Safety with Flag System	http://chicago.cbslocal.com/2011/12/09/city-hopes-for-better-pedestrian-safety-with-flag-system/
CDOT	Press Release	10/25/2011	Brian Steele	Campaign Aims to Improve Pedestrian Safety	
Chicago Illinois Car Accident Lawyer	Website	10/26/2011	Elman Law Group LLC	City of Chicago Initiative to Highlight Pedestrian Accidents and Pedestrian Safety	http://www.chicagoillinoiscaraccidentlawyerblog.com/2011/10/city-of-chicago-initiative-to.html
Chicago Sun-Times	Editorial	12/12/2011		Editorial: We See Red Flags Everywhere	http://www.suntimes.com/opinions/9345968-474/editorial-we-see-red-flags-everywhere.html
Chicago Sun-Times		1/27/2012	Fran Spielman	How's that Cabbie Driving? Call 311 to Report It, Stickers Urge	http://www.suntimes.com/news/metro/10272895-418/hows-that-cabbie-driving-call-311-to-report-it-stickers-urge.html
The Chicago Tribune	Website	7/27/2011	Alicia Fabbre	Seniors at Greater Risk than Most in City Crosswalks: Study Find that Senior Citizens are More Likely to be Struck than Any Other Age Group	http://articles.chicagotribune.com/2011-07-27/news/ct-x-0727-pedestrian-crossing-20110727_1_pedestrian-deaths-senior-citizens-crosswalks

Media Outlet	Medium	Date	Author	Title	Source
The Chicago Tribune	Website	10/25/2011	Jon Hilkevitch	Mannequins Stand Up for Safety Along Wacker Drive	http://www.chicagotribune.com/news/local/breaking/chi-mannequins-stand-up-for-safety-along-wacker-20111025,0,480025.story
The Chicago Tribune	Website	10/25/2011		Mannequins, Flags, Other Safety Props Help Kick Off Chicago Pedestrian Campaign	Not available as of July 26, 2012 http://www.chicagotribune.com/news/local/ct-met-pedestrian-safety-1026-20111026,0,7989567.story
The Chicago Tribune	Website - News	10/26/2011	Jon Hilkevitch	Mannequins Help Kick Off Pedestrian Safety Blitz - 32 Figures on Wacker Represent Pedestrians Killed Last Year in City Crashes	http://articles.chicagotribune.com/2011-10-26/news/ct-met-pedestrian-safety-1026-20111026_1_pedestrian-deaths-hit-and-run-accidents-safety-campaign
The Chicago Tribune	Website - News	12/8/2011	Jon Hilkevitch	First Mannequins, Now Flags to Boost Pedestrian Safety	http://articles.chicagotribune.com/2011-12-08/news/chi-city-transportation-officials-use-flags-to-raise-pedestrians-visibility-20111208_1_pedestrian-safety-pedestrian-crashes-flags
The Chicago Tribune	Website - News	12/9/2011	Jon Hilkevitch	Flags are Newest Weapon in City's Pedestrian Safety Push: Plastic Holders with Flags Installed at 10 Crosswalks	http://articles.chicagotribune.com/2011-12-09/news/ct-met-crossing-flags-1209-20111209_1_pedestrian-safety-pedestrian-crashes-crosswalks
The Chicago Tribune	Website	No Date	Alex Bordens	Pedestrians at Risk Citywide	http://www.alexbordens.com/wp-content/uploads/2012/04/Pedestrian-crashes.pdf
The Chicago Tribune	Editorial	5/12/2012	Mary Schmich	Taking Crosswalk Law 1 Step at a Time	
The Chicago Tribune	Newspaper	9/20/2012	Jon Hilkevitch	Crosswalk Law Ignored, Police Say	
The Chicago Tribune	Newspaper	1/28/2013	Jon Hilkevitch and Alex Richards	School Zones: Where Kids and Risk Intersect	
Chicagoist	Website	10/25/2011		Chicago Promotes Pedestrian Safety With Mannequins Representing Pedestrian Fatalities	http://chicagoist.com/2011/10/25/city_kicks_off_pedestrian_safety_ca.php
Chicagoist	Website	12/12/2011		City's New Pedestrian Safety Initiative Includes Crossing Flags at Select Intersections	http://chicagoist.com/2011/12/12/citys_new_pedestrian_safety_initiat.php

Media Outlet	Medium	Date	Author	Title	Source
Every Block Chicago	Website - comments	12/6/2011	Various	Mannequins at Jeff Park Terminal	http://chicago.everyblock.com/announcements/dec06-mannequins-jeff-park-terminal-4508529/
Expired Meter	Website	10/26/2011		Wacker Dr. Mannequins Promote Pedestrian Safety	http://theexpiredmeter.com/2011/10/downtown-mannequins-promote-pedestrian-safety/
Expired Meter	Website	12/9/2011		Flagged for Safety, CDOT Unveils New Pedestrian Safety, Education Initiative	http://theexpiredmeter.com/2011/12/flagged-for-safety-cdot-unveils-new-pedestrian-safety-education-initiative/
FHWA	Newsletter Pedestrian Forum	Winter 2012	Leah Walton	Update on NHTSA Grants to Pedestrian Focus Cities/States	http://safety.fhwa.dot.gov/ped_bike/pedforum/2012/winter/winter2012.pdf
FOX Chicago News	Website	10/25/2011		Statues Represent Pedestrians Killed by Traffic Put up on Wacker Drive	Not available as of July 26, 2012 http://www.myfoxchicago.com/dpp/news/metro/pedestrian-statues-mannequins-killed-traffic-wacker-drive-20111026
FOX Chicago News	Website	12/9/2011		City Installs Pedestrian Flags at Intersections	Not available as of July 26, 2012 http://www.myfoxchicago.com/dpp/news/metro/pedestrian-safety-flags-crossings-intersections-chicago-20111209
Grid Chicago	Website	10/25/2011	Steven Vance	CDOT Launches Pedestrian Safety Campaign	http://gridchicago.com/2011/cdot-launches-pedestrian-safety-campaign/
Grid Chicago	Website	10/26/2011	John Greenfield	Mannequins Remind Drivers and Pedestrians to Travel Safely	http://gridchicago.com/2011/dummies-remind-drivers-and-pedestrians-to-act-intelligently/
Grid Chicago	Website	12/15/2011	John Greenfield	My Nominations for Some of Chicago's Best Green Transportation Features: Most Intelligent Use of Dummies	http://gridchicago.com/2011/my-nominations-for-some-of-chicagos-best-green-transportation-features/
Grid Chicago	Website	12/29/2011	John Greenfield	Is Anybody Actually Using Chicago's New Pedestrian Safety Flags?	http://gridchicago.com/2011/is-anybody-actually-using-chicagos-new-pedestrian-safety-flags/
Huffington Post Chicago	Website	10/26/2011		Pedestrian Safety Mannequins in the Loop: Will They Make a Difference (PHOTOS)	http://www.huffingtonpost.com/2011/10/25/mannequins-on-wacker-driv_n_1030734.html#s434793&title=Pedestrian_Safety_Mannequins

Media Outlet	Medium	Date	Author	Title	Source
Loop North News	Website	12/10/2011	Steven Dahlman	On Tour of City, CDOT Mannequins Visit State Street	http://www.marinacityonline.com/news/mannequins1210.htm
Loop North News	Website	10/25/2011	Steven Dahlman	Photo: Waiting to Cross Wacker	http://www.marinacityonline.com/news/wacker1025.htm
NBC5 Chicago	Website	10/25/2011	Michelle Relerford and Jessica Guido	Mannequins Stand for Pedestrian Safety	http://www.nbcchicago.com/traffic/transit/mannequin-wacker-drive-pedestrian-fatality-132567748.html
NBC5 Chicago	Website	12/9/2011	Alise Blunk	Crossing the Street? Grab a Flag.	http://www.nbcchicago.com/traffic/transit/chicago-flag-pedestrian-safety-35344543.html
NBC5 Chicago	Website	1/27/2012	Alexandra Clark	Taxi Cabs: How's My Driving?	http://www.nbcchicago.com/news/local/Taxi-Cabs-Hows-My-Driving-138207209.html
The Officer	Website			Mannequins Representing Dead Pedestrians Line Chicago Roadway to Promote Safety	Not available as of July 26, 2012 http://www.officer.com/news/10442157/mannequins-representing-dead-pedestrians-line-chicago-roadway-to-promote-safety
The PSS Edge	Website - blog	10/25/2011		Mannequins Stand Up for Safety Along Wacker Drive	http://www.plasticsafety.com/blog/?p=1734
Radio Reporting	Website			Mannequins on Wacker Drive Serve as Safety Reminder	Not available as of July 26, 2012
Redeye	Website	2/1/2012	Ernest Wilkins	Bad Cabbies are on Notice	http://articles.redeyechicago.com/2012-02-01/news/31014257_1_bad-cabbies-cabdrivers-stickers
Sustainable City Network	Website	10/25/2011	CDOT - press release	CDOT Launches Pedestrian Safety Campaign	http://www.sustainablecitynetwork.com/topic_channels/transportation/article_cb5c7b64-ff57-11e0-a5f7-0019bb30f31a.html
TBD All Over Washington	Website	11/15/2011		Street Smart Kicks Off Its Fall 2011 Pedestrian Awareness Campaign	http://www.tbd.com/blogs/tbd-on-foot/2011/11/street-smart-kicks-off-its-fall-2011-pedestrian-awareness-campaign--13604.html
View - Law Enforcement	Website	10/27/2011		Chicago Mannequins Have a Unique Message	http://www.officerview.com/news/Chicago-mannequins-have-a-unique-message.html

Media Outlet	Medium	Date	Author	Title	Source
WGN TV	Website	10/25/2011	Jon Hilkevitch	Mannequins Stand Up for Safety Along Wacker Drive	http://mobile.wgntv.com/p.p?m=b&a=rp&id=1059184&postId=1059184&postUserId=30&sessionToken=&catId=7051&curAbsIndex=0&resultsUrl=DID%3D6%26DFCL%3D1000%26DSB%3Drank%2523desc%26DBFQ%3DuserId%253A30%26DL.w%3D%26DL.d%3D10%26DQ%3DsectionId%253A7051%26DPS%3D0%26DP
WGN TV	Website	1/27/2012		New Push to Improve Taxi Service	Not available as of July 26, 2012 http://www.wgntv.com/news/wgntv-taxi-service-improvements-janaury27,0,6168966.story
Yahoo	Website	10/25/2011	Rachel Bogart	Chicago Launches Pedestrian Safety Campaign	http://news.yahoo.com/chicago-launches-pedestrian-safety-campaign-224300672.html
Yahoo Voices	Website	10/25/2011	Jaclyn Berger	Mannequins in Chicago Remind Pedestrians to be Safe	http://voices.yahoo.com/mannequins-chicago-remind-pedestrians-safe-10287625.html

Media Coverage Screen Shots

Dozens of dummies have message for pedestrians

Theresa Gutierrez

October 25, 2011 (CHICAGO) (WLS) -- They can't talk, but dozens of dummies lining Wacker Drive are speaking volumes. The mannequins have a message for pedestrians -- and drivers -- in downtown Chicago.

The citywide pedestrian safety campaign kicks off this week with an installation of 32 mannequins along Wacker Drive, each one representing one of the 32 pedestrians killed in Chicago crashes in 2010. The campaign is aimed at reducing injuries and fatalities .

"Drivers need to be safer, but I also think pedestrians need to be more smart, look both ways when crossing the street," said pedestrian Dan Hetland.

In 2010, there were just under 3,000 crashes involving pedestrians. Pedestrian injuries and fatalities in Chicago have declined.

"It is our job to ensure that pedestrians stay safe. They are the most vulnerable population on our streets," said Chicago Department of Transportation Commissioner Gabe Klein.

Drivers must obey traffic signals and let pedestrians cross when they have the right of way. At a crosswalk with no traffic signals, the driver must stop for pedestrians crossing.

The campaign is aimed at drivers to stop for pedestrians in crosswalks.

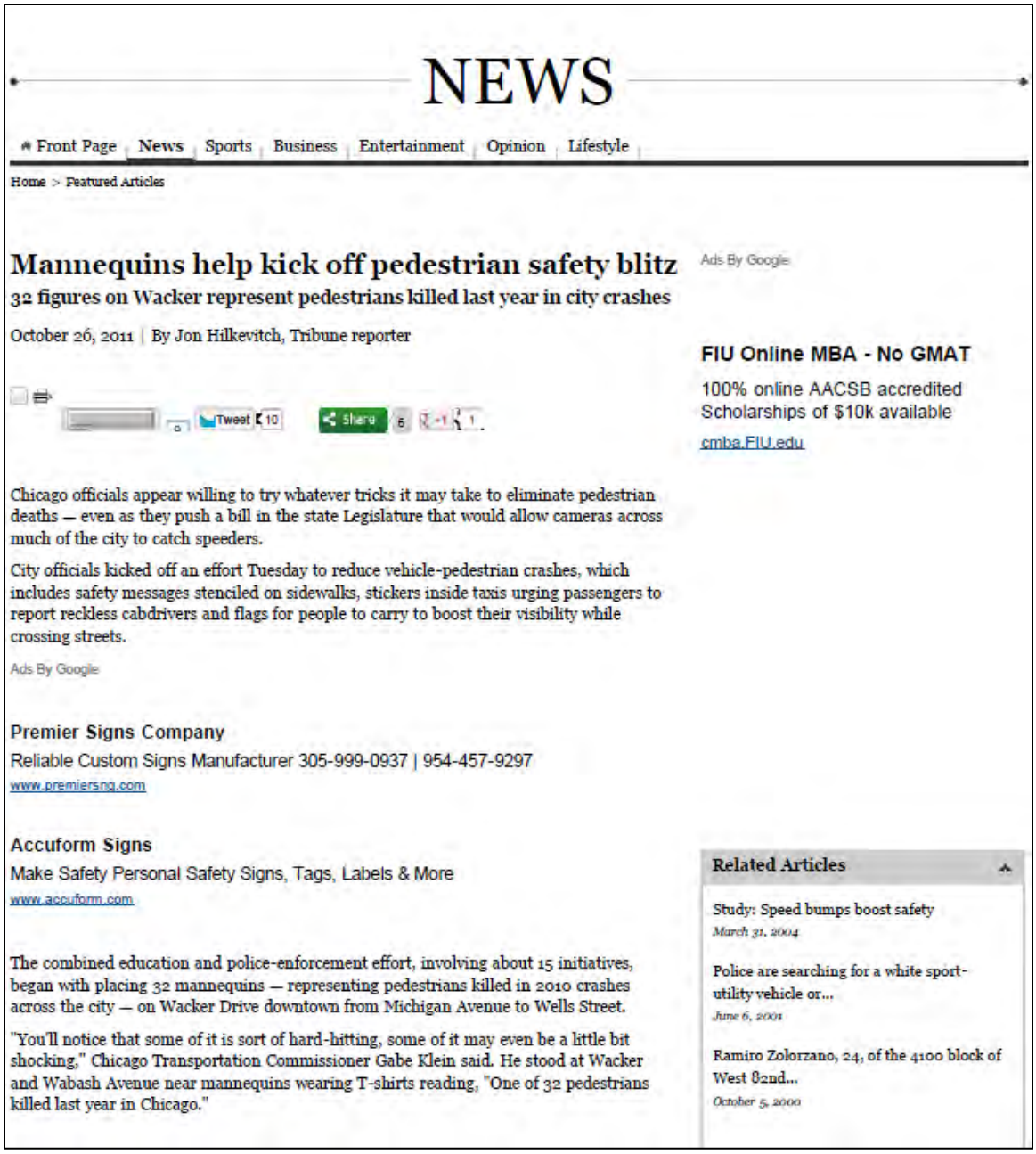
"Just because drivers want to rush wherever they are going, it is a priority that pedestrians are more important," said driver Iris Torocio.

"Enforcement programs are very important," said Chicago Police Lt. David Blanco.

CDOT says about 80 percent of vehicle-pedestrian crashes in Chicago occur at intersections with pedestrians crossing the street on the walk signal and that drivers failing to yield is the No. 1 reason for many of these crashes. They believe the mannequins will call attention to the problem.

"It is good to promote awareness, but what you need...better law enforcement," said driver Joe Donnelly.

In addition to the mannequins, other high-profile elements of the campaign will include messages on bus shelters, trash bins, information panels posted on sidewalks, and outreach to taxi drivers, schools and senior citizen shelters. As part of the new campaign, small crossing flags will be installed in neighborhoods and pedestrian safety messages will be stenciled on sidewalks in high traffic areas around the city.



NEWS

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Mannequins help kick off pedestrian safety blitz

32 figures on Wacker represent pedestrians killed last year in city crashes

October 26, 2011 | By Jon Hilkevitch, Tribune reporter

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Chicago officials appear willing to try whatever tricks it may take to eliminate pedestrian deaths — even as they push a bill in the state Legislature that would allow cameras across much of the city to catch speeders.

City officials kicked off an effort Tuesday to reduce vehicle-pedestrian crashes, which includes safety messages stenciled on sidewalks, stickers inside taxis urging passengers to report reckless cabdrivers and flags for people to carry to boost their visibility while crossing streets.

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The combined education and police-enforcement effort, involving about 15 initiatives, began with placing 32 mannequins — representing pedestrians killed in 2010 crashes across the city — on Wacker Drive downtown from Michigan Avenue to Wells Street.

"You'll notice that some of it is sort of hard-hitting, some of it may even be a little bit shocking," Chicago Transportation Commissioner Gabe Klein said. He stood at Wacker and Wabash Avenue near mannequins wearing T-shirts reading, "One of 32 pedestrians killed last year in Chicago."

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Ramiro Zolorzano, 24, of the 4100 block of West 82nd...
October 5, 2000

The city announced a goal to reduce pedestrian fatalities to zero by 2020. In addition to the 32 deaths last year, about 3,000 pedestrians were injured in vehicle-related accidents citywide, records show.

The safety push is being conducted by the city's Department of Transportation and Police Department, with funding from the National Highway Traffic Safety Administration.

The pedestrian safety blitz was hinted at months ago with the launch of the city website chicagopedestrianplan.org.

But the program was unveiled Tuesday, even though key elements are not yet ready. It happened amid legislation introduced in Springfield this week to allow speed cameras on many Chicago streets to safeguard children and other pedestrians near schools and parks.

Chicago received a $545,000 grant from the federal traffic safety agency to conduct a study released this summer that pinpointed specific pedestrian-related traffic threats, including hit-and-run accidents, and to zero in on hot spots for crashes involving pedestrians.

But the camera legislation does not focus on high-accident locations identified in the new study. Instead, it would create far broader "safety zones."

Besides the department store-style mannequins placed Tuesday morning on Wacker, other high-profile elements of the safety campaign will include messages on bus shelters and trash bins, along with information panels posted on sidewalks, officials said. There will also be outreach efforts for taxi drivers, schools and senior citizen centers, officials said.

On the enforcement end, police this month will resume crosswalk stings in which plainclothes officers posing as pedestrians use crosswalks as vehicles approach intersections, said police Lt. David Blanco, commander of the department's traffic enforcement unit.

Drivers who fail to stop will be ticketed, Blanco said. Fines range from $50 to $500. A new state law requires drivers to stop, not simply yield, for pedestrians.

Oldsmobile Ninety-Eight was damaged Tuesday in a...
January 14, 1999

A Sept. 14 court date has been set for Donald Kamradt, 39...
September 3, 1999

HUFF POST CHICAGO
THE INTERNET NEWSPAPER: NEWS BLOGS VIDEO COMMUNITY

Pedestrian Safety Mannequins In The Loop: Will They Make A Difference? (PHOTOS)

The Chicago Department of Transportation launched a citywide awareness campaign by installing 32 mannequins along Wacker Dr., each representing one of the 32 pedestrians killed in Chicago crashes in 2010.

Organized in partnership with the Illinois Department of Transportation, the Chicago Police Department and National Highway Traffic Safety Administration, who funded the installations, the campaign will also feature awareness messages in ad spaces throughout the city, stenciling pedestrian safety messages on sidewalks in high traffic areas and direct outreach to schools, senior facilities and taxicab drivers, according to a news release.

"Pedestrians are the most vulnerable users of the public way," said CDOT Commissioner Gabe Klein, according to the release. "This campaign is specifically designed to change the behaviors that lead to pedestrian crashes."

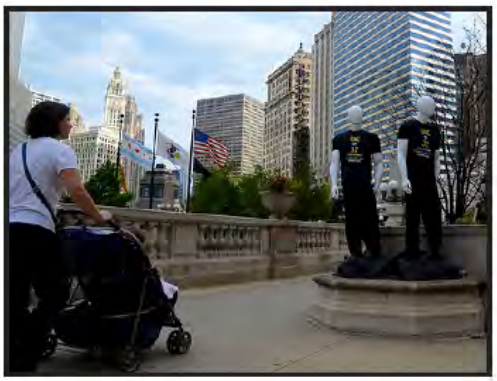
There were nearly 3,000 crashes involving pedestrians in 2010, although pedestrian injuries and fatalities in Chicago have declined over the past several years, CDOT reports. The campaign is based on a recent Pedestrian Crash Analysis conducted by CDOT that is being used to develop the Chicago Pedestrian Plan, and identified key problem areas addressed by this promotional campaign.

Do you think these mannequins and other measures will make Chicago pedestrians walk smarter? Tell us in the comments.

GRID CHICAGO

My nominations for some of Chicago's best green transportation features

By John Greenfield On December 15, 2011



Most intelligent use of dummies

The city's pedestrian safety campaign

The 32 ghostly-white mannequins installed along Wacker Drive last October weren't Halloween decorations. They represented the 32 pedestrians killed by cars in Chicago last year, part of Chicago's new shock-and-awe campaign to draw attention to traffic safety. The "It's Up To You" campaign also includes placard ads with graphic images of the tragic results of dangerous driving, such as a motorist cowering in her vehicle with a body sprawled across the shattered windshield. The city recently relocated nine of the mannequins to CTA stations and plans to install four in the State Street median between Wacker and Lake Street. "Some of it is a little hard-hitting," says transportation chief Gabe Klein. "But we want to remind people that when you're frustrated behind the wheel, these are real people and real lives."

Chicagopedsafety.org

Chicago Tribune
Breaking News, Since 1847

First mannequins, now flags to boost pedestrian safety

By Jon Hilkevitch
Tribune reporter
4:07 PM CST, December 8, 2011

First came mannequins representing pedestrians killed in vehicle crashes in Chicago, and on Thursday crossing-the-street flags flapped in the breeze as the next installment in a new safety campaign aimed at drivers called "It's Up to You."

The small street-crossing flags were placed in plastic holders Thursday at crosswalks at 10 Chicago intersections near schools, senior citizen centers and hospitals. The locations were selected because none has traffic signals or stop signs, said officials at the Chicago Department of Transportation.

The idea is that pedestrians who want to make themselves more visible to vehicle drivers will take a flag from the bucket, wave it to catch drivers' attention and then cross the street and place the flag in another holder on the other side. CDOT officials were on hand Thursday to instruct pedestrians how to use the flags.
In late October near crosswalks downtown, the city placed 32 mannequins wearing T-shirts reading, "One of 32 pedestrians killed last year in Chicago." The mannequins were later moved to other locations to bring attention to the problem of more than 3,000 vehicle-pedestrian crashes in Chicago each year, officials said. Most of the mannequins are now in nine CTA rail stations and four are on the State Street median between Lake Street and Wacker Drive.

The mannequins, crossing flags, placards inside taxicabs urging passengers to report reckless cabdrivers and public safety messages placed on trash bins are part of the effort to change behaviors that lead to pedestrian crashes, said Chicago Transportation Commissioner Gabe Klein.

State law requires drivers to stop for pedestrians in crosswalks. About 80 percent of vehicle-pedestrian accidents in the city occur at intersections and frequently involve people crossing the street with a walk signal, according to a city study released this summer. The No. 1 cause of the crashes was drivers failing to yield, the study said.

The crossing flags are at the following intersections: 71st and Spaulding, near Tarkington Elementary School; Central and Walton, near Brunson Elementary School; Belmont and Kilpatrick, near a senior housing building; 93rd and Oglesby, near Trinity Hospital; 63rd and Talman, near a senior center; 50th and Cottage Grove, near Hales Franciscan High School; Devon and Francisco, near the Croatian Cultural Center; 64th and Western, near Claremont Academy; 79th and Throop, near a senior housing building; and Elston, Grace and Bernard, near Murphy Elementary School.

jhilkevitch@tribune.com

Twitter: @jhilkevitch

City of Chicago The City of Chicago's Official Site

July 3, 2012

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CDOT Installs "Stop For Pedestrians" Signs at Crosswalks

Signs to Remind Drivers of State Law that Requires Them to Stop if Pedestrians are Present

As part of an ongoing effort to increase pedestrian safety and reduce the number of crashes, the Chicago Department of Transportation (CDOT) has begun installing signs at crosswalks that remind drivers of the state law that requires them to stop if pedestrians are in the crosswalk.

Chicago experiences roughly 3,000 crashes annually between motor vehicles and pedestrians, resulting in an average of 50 deaths each year.

"Even one life lost is too many, and we must take action to promote pedestrian safety in multiple ways. These warning signs help in that effort," said CDOT Commissioner Gabe Klein. "Education and enforcement are critical components to ensure that motorists understand their role and responsibility in public safety."

The 2010 state law, which was codified in Chicago's municipal code last year under Mayor Rahm Emanuel's administration, requires motorists to stop – not just yield – to pedestrians at a crosswalk. The highly visible four-foo high signs use words and graphics to say "State Law: Stop for Pedestrians Within Crosswalk."

CDOT is currently installing the first 50 of these signs in neighborhoods across the city in places where pedestrians and vehicles can come into conflict, especially near schools, parks, hospitals and public transit. The locations were suggested by aldermen who are utilizing a portion of their 2012 infrastructure menu funds to cover the installation expenses.

The new signs are part of a toolbox of traffic-calming devices the City uses to increase safety and reduce the number of accidents between pedestrians and vehicles. The signs are on flexible posts and will be often installed ir the roadway median at uncontrolled crosswalks in order to increase their visibility.

# # #

CBS Chicago

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LOCAL

City Begins Installing New 'Stop For Pedestrians' Signs

July 3, 2012 4:48 PM

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Chicago city workers install a new sign at Diversey Parkway and Wilton Avenue, reminding drivers to stop for pedestrians in the crosswalk. (Credit: CBS)

CHICAGO (CBS) – You've no doubt seen those striped crosswalks around the city of Chicago, where drivers are supposed to stop for pedestrians. Now drivers are getting an extra visual cue.

The city is putting up the first 50 signs – positioned in the middle of crosswalks – saying "Stop For Pedestrians Within Crosswalk."

A state law passed in 2010 requires drivers to stop for pedestrians who are walking in crosswalks, not simply yield, even if the pedestrian is crossing against a "don't walk" signal. Pedestrians are legally not allowed to enter a crosswalk unless they have a "walk" signal, or if there is time for a car on the cross street to stop.

WBBM Newsradio's Steve Miller spoke with one pedestrian after he'd just crossed Diversey Parkway at Wilton Avenue, where a sign just had just gone up.

"The car wouldn't stop. I forced my way across the street. I pointed to the sign. It seemed like they got the picture, but it seems like they wouldn't have stopped unless I asserted myself," said Julian Kendall of Chicago.

Filed Under

Heard on WBBM 780, Local, News, Syndicated Local, Watch + Listen

Related Tags

Ald. Michele Smith, Pedestrians, signs, Steve Miller, Stop For Pedestrians

Don't Miss This

Lollapalooza Gallery: Funky Fashion & Mud

Online Lottery Sales Falling Short As Big Powerball Drawing Approaches
Lottery vendors are busy as players snap up tickets for the $320 million Powerball drawing Wednesday night, while officials say online lottery ticket sales have been falling short of expectations.

Overnight Shootings In Chicago Leave 1 Dead, 6 Wounded
Gunfire left one man dead and another wounded just after midnight in the South Shore

Best Grilled Cheese in Chicago

Horrible Horoscopes: Did You Get Good News?

Best Cold Treats in Chicago

Newly Single Celebs

LISTEN: WBBM Newsradio's Steve Miller reports

Ald. Michele Smith (43rd) said her ward is getting many of this first wave of signs. She ald it will take some drivers a little while to figure out what they're supposed to do.

"They're trying to understand how the law works. I think people are really quite grateful for it. It's a great innovation."

The Chicago Department of Transportation said hundreds of signs will eventually go up at crosswalks. Transportation Commissioner Gabe Klein says the signs and installation cost about $400 each. The money comes out of each alderman's infrastructure fund.

WE RECOMMEND

2 Teens Charged In Series Of Barn Fires

3 Dead, 5 Wounded In Overnight Shootings In Chicago

23 Hurt In Shootings Across Chicago This Weekend

McHenry County Sheriff's Deputy Charged With Child Porn, Abuse

MORE FROM AROUND THE WEB

Penny of 'The Big Bang Theory' as You've Never Seen Her Before (StyleBistro)

Off-Duty Cop Crashes Motorcycle Into Little Girl Then Kills Her Enraged Dad (CafeMom)

No jail for mechanic in deadly NYC crane collapse (Chain's New York)

Steven Seagal Sued for Death of Dog (Pinkbike.com)

neighborhood, and five others were wounded across the city in the overnight hours.

Young Immigrants Head To Navy Pier For Help Getting Work Permits

Wednesday will be a day of historic proportions, as thousands of young people who were brought into the country illegally get the opportunity to apply to live and work in the United States legally.

6-Year-Old Girl Missing After Being Taken For Walk By Non-Custodial Mom

Police are searching for a 6-year-old girl whose non-custodial mother took her for a walk in Calumet Park and never returned.

Navy Warships On Display At Navy Pier This Week

Chicagoans are flocking to Navy Pier for Navy Week, and visitors are getting an up-close look at some Navy warships.

VIDEO NEWS

CBS 2 Weather Forecast (11AM)

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Southwest Airlines "Atlanta At Last" Promotion

The next time your favorite Chicago sports team plays in Atlanta, getting there will be on us, compliments of Southwest Airlines! Enter here for your chance to win roundtrip airfare for two. While you're at it, sign up to receive Southwest Airlines weekly Click 'n Save specials!

Great Clips Half-time Challenge

Sign up today for a chance to compete in the Great Clips halftime skills challenge on Sunday, September 23 at Soldier Field! Three lucky Bears fans will enjoy the game against St. Louis and battle it out during halftime for the Grand Prize, a trip for two to see Chicago play in Minnesota on December 9th, courtesy of Great Clips!

Win an Epic Rock Experience from "The Expendables 2" & 670 The Score

WSCR and The Expendables 2 want to send you on an epic Rock experience! One lucky winner and guest will receive a trip to New York to see the legendary bands KISS and Mötley Crüe perform live. Not epic enough? Thanks to our friends at Live Nation, you'll join Motley Crue on stage and ride with Tommy Lee on his personal drum roller coaster. It doesn't ge [...]

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Appendix E
Unused Marketing Material

The CDOT Pedestrian Awareness Campaign included marketing materials originally designed around “See You See Me.”

While these materials were not used in the official rollout of the campaign, these materials in their draft form provide an example of a different campaign strategy that may be desirable for other municipalities.

A PowerPoint presentation of the proposed marketing materials and samples of the postcards and coasters are shown on the following pages.

Contents

Chicago Department of Transportation
Pedestrian Safety Awareness Campaign

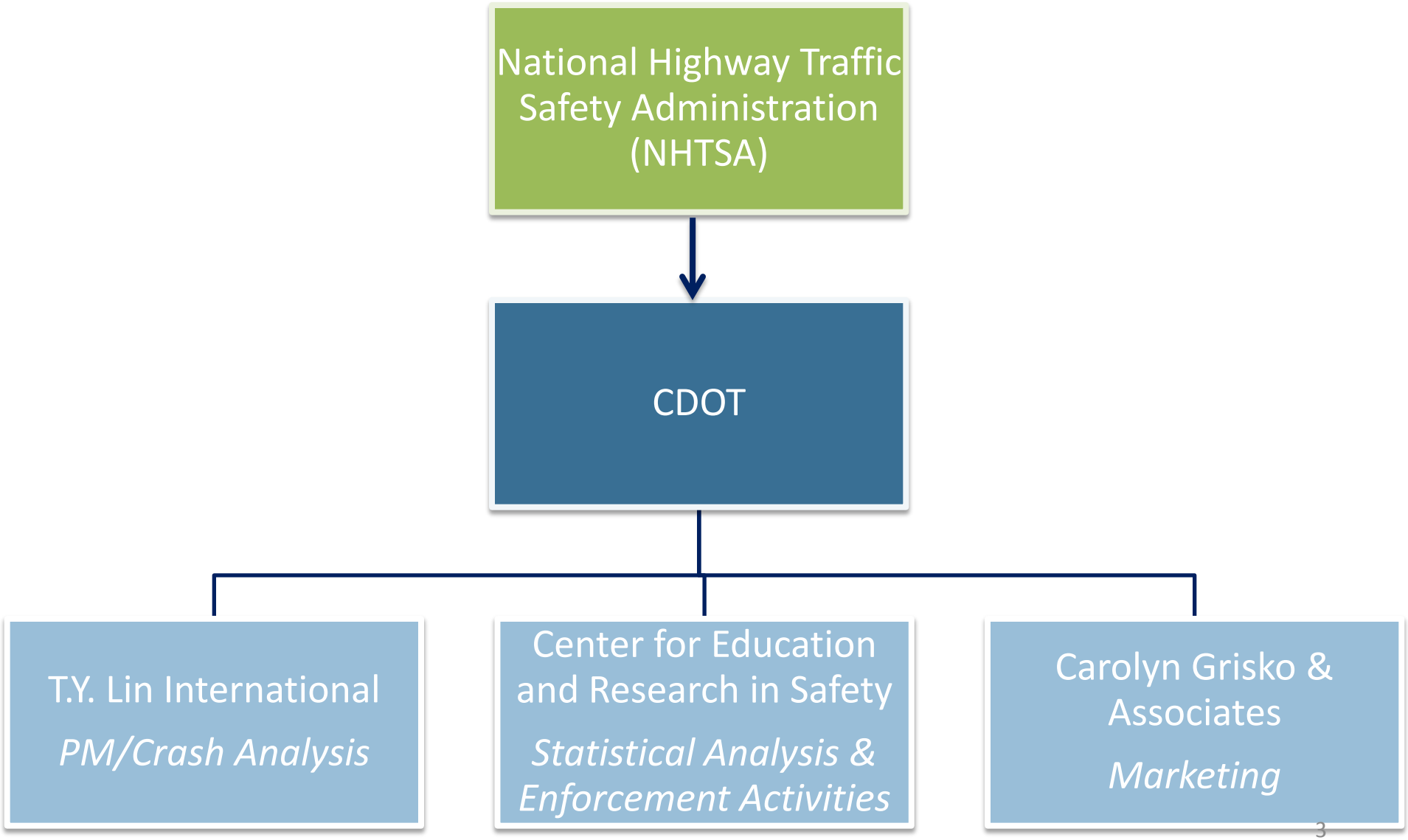
Presentation to the Mayor's Pedestrian Advisory Council

May 4, 2011

Presentation

- Project Status
- Marketing & Media Plan
- Enforcement Campaign
- Next Steps

Project Team



Project Status

- Pedestrian Crash Analysis
- Campaign Slogan and Key Messages
- Marketing and Media Plan
- Marketing and Media Outreach
- Enforcement – Site Specific
- Evaluation of Marketing and Enforcement

Project Status

- Campaign Slogan and Key Messages
- Marketing and Media Plan
  - Communications Partners

Campaign Launch Event

- Crash Analysis Reports
- Marketing Campaign
- Enforcement Efforts
- Pedestrian Plan Public Outreach

Campaign Slogan & Logo

Campaign Theme

SEE YOU. SEE ME.

CHICAGO

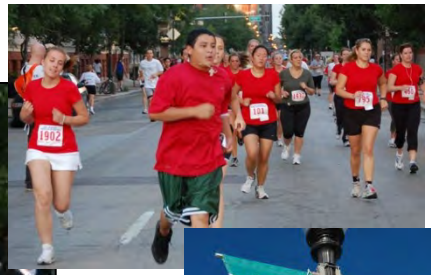
Let's look out for each other!

Potential Marketing Tactics

- Chicago Landmark Covers
- Crossing Flags
- Guest Artists
- Website/Public Engagement

Potential Marketing Tactics

- CTA Advertisements
- Taxi Ads and Window Stickers
- 5K Pedestrian Safety Awareness Walk
- Street Banners



Potential Marketing Tactics

"Guerilla Marketing"

- Car Window Clings
- Sidewalk Logo
- Guest Crosswalkers

Existing Communication Channels

- CAPS Meetings
- Schools
- Aldermen & Community Groups
- Advocacy Groups

Key Messages

- Target Groups & Behaviors
  - *Key Message*
  - *Copy Point – Supporting Message*

Audience:
Drivers

Target Behavior:

✶ 52% of pedestrian crashes at signalized intersections involved turning vehicles

Key Message: Look carefully before turning at an intersection

Copy Point: Turning left? Do it right. Watch for pedestrians.

Audience:
Youth (5-14)

Target Behavior:

✶ Youth pedestrians were more likely to be struck mid-block and not in a crosswalk than any other age group

Key Message:

Always use a crosswalk; don't cut mid-block

Copy Point: ***Play it safe!***

Audience:
Seniors (65+)

Target Behavior:

✶ Despite a lower crash rate than other age groups, seniors (65+) were over-represented in fatal and serious injury crashes

Key Message: Know your abilities – you may need extra time to cross.

Copy Point: Enjoy walking in your community; choose safe routes and signalized crossings

Audience:
Taxi Drivers/Companies

Target Behavior:

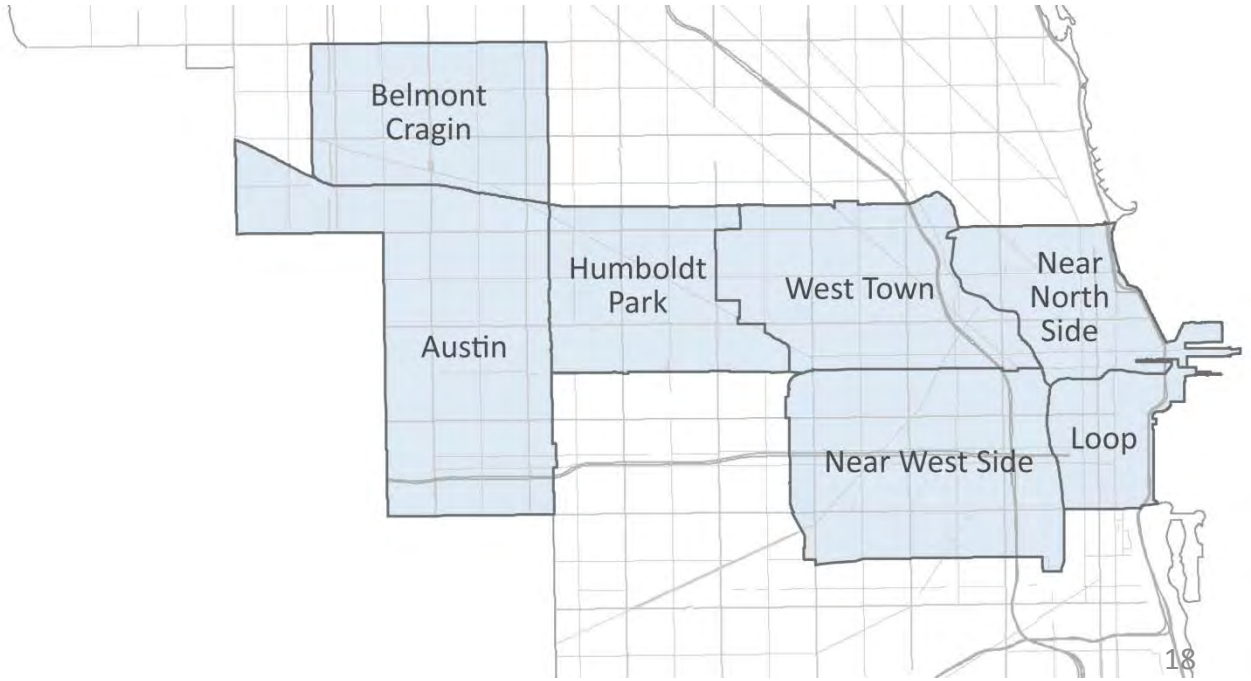
✶ Taxis were involved in 28% of pedestrian crashes in the Central Business District

Copy Point:

Here's a tip: Any pedestrian could be a potential fare. Make it your business to be careful at intersections and near crosswalks.

Enforcement Campaign

- Uncontrolled Crosswalks
- Signalized Intersections
- Speed



Next Steps

- Pre-Campaign Data Collection (May)
- Press Event (mid-June)
  - Marketing Campaign
  - Enforcement Campaign

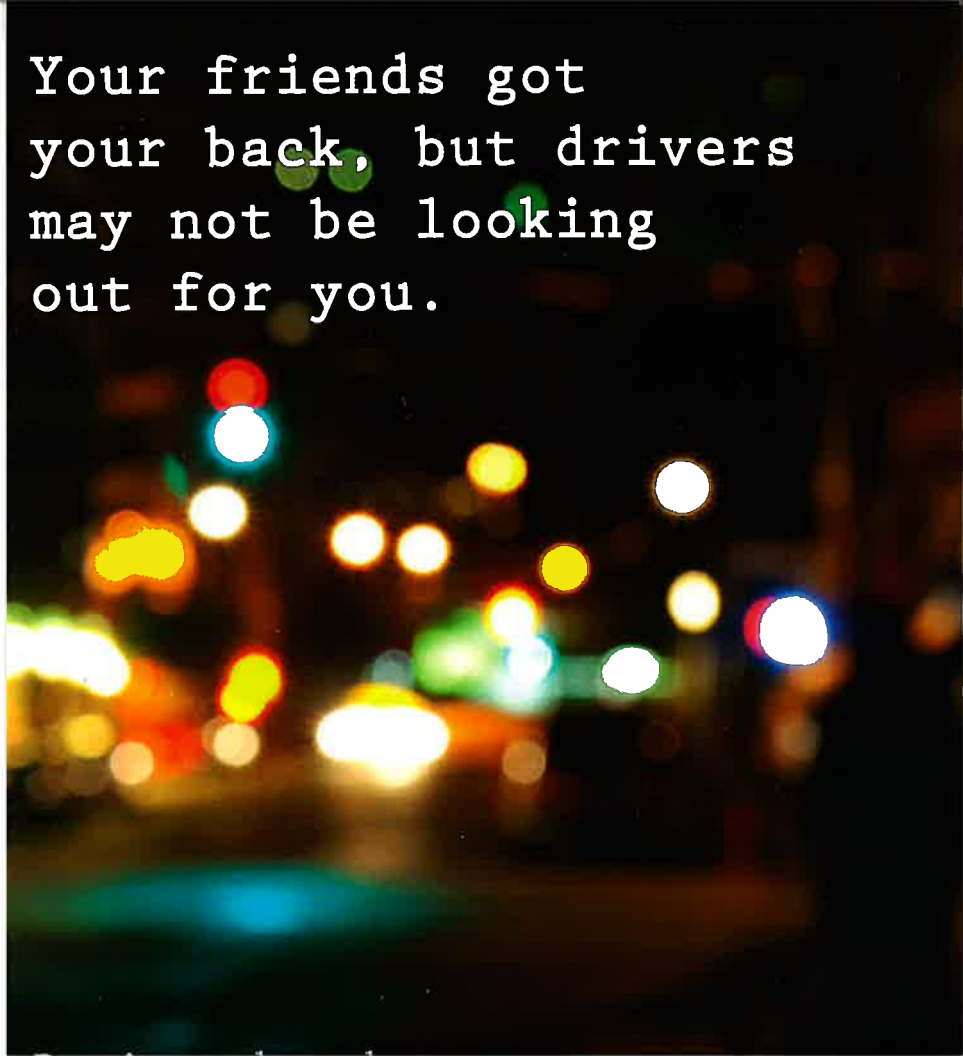
Comments or Questions?

Stacey.meekins@tylin.com

James.considine@tylin.com

Kiersten.grove@cityofchicago.org

Your friends got
your back, but drivers
may not be looking
out for you.




Drivers may not be looking out for you.
Don't take chances.
If it's you against the car, the car will always win.
SeeYouSeeMeChicago.org

SeeYouSeeMeChicago.org

Pedestrian Safety Campaign Creative Concepts

July 27, 2011

Approved Creative Direction

Tone of Campaign
- Friendly, positive, 'we're in this together'

Copy Direction
- Use key messages, tongue and cheek copy is desired for one concept

Illustration or Photo
- CDOT likes both photos and illustrations, only images that are meaningful to pedestrian safety that correspond to copy well

Creative Concept Notes:

- All images are For Preview Only (FPO) and are low resolution, so may look slightly pixilated or foggy. Once we have client approval on concepts and images, we will purchase the stock image art in a high resolution file- which will eliminate this issue.

- Concept 3 is an illustrated photo, which allows for a stylized design feel and more opportunity to manipulate the image to highlight signage and/or crosswalks.

Approval Notes & Direction

Included in the following slides:

- 3 Campaign Creative Concepts
  - Each Creative Concept includes 3 Versions
- Glasses Hand-Out Creative Concept

Approval Process & Recommendations:

Campaign Creative Concepts
- We recommend choosing one overall Creative Concept (design look and feel) for campaign materials.
- This chosen concept will have three primary versions based on the audience (i.e. Driver, Pedestrian, Both).

Glasses Hand Out Recommendation
- To provide an explanation and encourage audience participation, it is recommended that a palm card specifically for the glasses is developed.
- This palm card would be distributed in conjunction with the glasses at Alderman's offices, events (city & press), and possibly schools and/or Community Outreach letters.

Approval Notes & Direction

How will the three versions be used in materials? Will this impact the estimated printing price?

Poster:
- Recommended use is to order equal pieces of the "Driver" and "Pedestrian" version and approximately 50% of the order to be the "Both" version. This material allocation will ensure that multiple messages are resonating with all audience groups.
- Adding two versions will not impact the printing price because the print estimates are based on digital printing, not off-set printing.

Palm Card:
- The palm card is a two sided piece. Recommended use is to have the "Driver" on one side and "Pedestrian" version on the other side.
- Will not impact current estimated price, this piece was specified in this manner.

Banner:
- Recommended use is to use the "Both" version for the banners.
- Will not impact estimated price, this piece was specified in this manner.

Glasses Palm Card:
- Small quantity print that aligns with glasses order is recommended. Glasses Palm Card can be distributed with Aldermen, Press Kits, City/Press Events, and possibly at Schools and/or Community Outreach Letters
- The impact to price will be very minimal, depending on final Glasses quantity. The order will be added and printed during the same press run as the other version of the Palm Card to ensure low costs.

Approval Notes & Direction

Please provide the following feedback

Approval Needs:

./ Out of the three Concepts (design look and feel), which is preferred?

./ From this preferred concept, do you have revisions or questions about the design or images included in any of the three versions?

./ From this preferred concept, do you have revisions or questions about the messaging/copy used in any of the three versions?

./ Please confirm the logo usage on each concept, providing approval or direction on color v. black and white for CDOT and the City Seal.

./ Agreement or revisions to the 3 version recommendation (Driver, Pedestrian, Both).

./ Agreement or revisions to the application of creative to Poster, Palm Card, and Banner.

./ Agreement or revisions to the Glasses Palm Card version recommendation.

Concept 1: Illustrated Based

Concept 2: Image Based

Concept 3: Illustrated Photo Based, Individuals

Glasses Handout

Glasses Handout Notes:

- The campaign's primary call to action is See You. See Me. With a focus on being alert walking or driving. The white campaign glasses are a physical representation of the campaign goal that introduce an opportunity for citizen participation and media attention.
- We recommend using the following creative concept to provide an introduction and explanation of the glasses.
- The creative application would be a palm card- sized handout that could be used at Alderman's offices, schools, community outreach letters and/or events (City, community, or press).
- The lithograph images on the design concepts were created using an iPhone/Android application. Users will be able to take the same lithograph photos from this app.

Glasses Handout Concept: Lithograph Glasses

Appendix F
Chicago Police Department General Operating Procedures for Pedestrian Safety Enforcement at Signalized and Unsignalized Intersections, May 2012

The Chicago Department of Transportation in coordination with Sergeant Slavin of the Chicago Police Department prepared the following procedures for conducting safety enforcement campaigns at pedestrian crosswalks. The procedures are organized to address the varying degree to which resources may be available and because crosswalk locations may present unique characteristics that will impact enforcement, the document is designed to be flexible and used as a guide.

The *General Procedures for Pedestrian Safety Enforcement* are available to the Chicago Police Department's Traffic Division for high visibility enforcement campaigns and in the future can be made available to district level units enforcing pedestrian safety.

Chicago Police Department

General Operating Procedures for Pedestrian Safety Enforcement at Uncontrolled Crosswalks and Signalized Intersections

Introduction

The Chicago Police Department (CPD), in conjunction with the Chicago Department of Transportation (CDOT), is working to make the City's streets safer for citizens of all ages and abilities. Enforcement is an important part of the City's overall program to improve the pedestrian environment. This document provides general operating procedures for conducting pedestrian safety enforcement campaigns at uncontrolled crosswalks and at signalized intersections. Enforcement campaigns increase driver compliance with the law by citing violators and also by showing the community at large that crosswalk laws are enforced.

The procedures in this document are a guide. Every site and enforcement situation can present unique issues; the CPD enforcement team must be flexible and ready to adapt these guidelines to the site and situation specific issues.

Pedestrian crosswalk enforcement is normally conducted by the CPD Traffic Enforcement Section. However, District Supervisors have the ability to direct enforcement activities, if requested by the community and the District Supervisor has the manpower to conduct the effort. The purpose for these general operating procedures is to provide an understanding of how CPD conducts enforcement operations. The procedures provide guidance from basic one-person operations to advanced operations that would be highly visible to the neighborhood.

Pedestrian safety enforcement may be conducted as part of an officer's routine duty. That is, all officers should be aware of pedestrian crosswalks rules and the importance of enforcing the rules when they are a witness to such events. Research indicates that visible, targeted traffic safety enforcement may also reduce other crimes in the area.

Types of Enforcement

Enforcement procedures can range from basic to high visibility depending on resources and the desire to draw attention to the effort. Basic enforcement means using limited resources to conduct a pedestrian safety enforcement campaign. This could be simply stationing an officer in a patrol car to enforce pedestrian safety laws at a specific location.

A high visibility campaign refers to using multiple officers at a location to conduct an enforcement operation and increase compliance community-wide. Signage may be used to increase visibility. High visibility campaigns draw community attention to the enforcement that is underway. The media may be interested as well. Media attention can draw a wider audience and community awareness of the issue and problem.

Signalized Intersection Considerations

Enforcement operations at uncontrolled crosswalks and at signalized intersections utilize similar tactics but there are site characteristics that need to be considered at signalized intersections. The following are site characteristics at signalized intersections that need to be considered before setting up a pedestrian safety enforcement effort.

1. Traffic Volume – Signalized intersections may have a high number of motorists and pedestrians that create complexities for enforcement efforts. Traffic flow should be taken into consideration. The stationing of patrol cars to pursue offenders will require careful consideration.
2. Bus Stops – Signalized intersections may have bus stops on all four legs of the intersections. Officers need to be aware of bus stop locations to ensure that bus stops are not blocked and bus traffic can operate normally.
3. Turning Movements – Drivers at signalized intersections are more likely to commit a failure to stop for pedestrians while turning right or left. Officers need to determine which turning movements the enforcement operation will focus on so that the placement of squad cars can safely pursue offenders. Directions of travel with the highest number of motorist and pedestrian traffic will change during the morning, afternoon and evening travel hours
4. Pursuits – A police vehicle or vehicles has to be stationed to pursue offenders. The officer often had to pursue other traffic violations not related to crosswalk enforcement. Crosswalk enforcement became a secondary activity.
5. Lack of High Visibility – It is difficult to create a high visibility scene at uncontrolled locations. At an intersection it may not be so easy to spot a police squad car or recognize that it is high-visibility event.

Enforcement Preparation

Pedestrian Safety Training Course – All team members should review the CPD Pedestrian Safety E-Learning Course for information on the most common driver infractions and citations.

Pedestrian Safety Training Bulletin (ETB# 12-10) – Officers who will be issuing citations should review the CPD Pedestrian Safety Bulletin for local and state code language.

Site Selection

Enforcement locations with clearly marked crosswalks and pedestrian signage are preferred. However, in some cases targeted enforcement locations may have unmarked or faded crosswalks and/or no signage. Enforcement operations may still be conducted at these sites because pedestrian safety laws apply at both marked and unmarked crosswalks. Sites can be selected based on local information or a crash analysis of the City.

Basic - The District may conduct a basic enforcement campaign in response to a request from the community or alderman. Sites may be selected based upon recent crashes, or other known problems.

High Visibility - Locations for high visibility enforcement should have a high number of vehicles and a history of being dangerous for pedestrians. These locations may be selected by CDOT based upon crash analysis. CDOT should be notified of a high visibility operation location and time at least 3 days prior to enforcement. CDOT will post the information on the City's website and alert an alderman of the operation. A media announcement may be made prior to the enforcement event.

Personnel

Enforcement team members and roles will vary depending upon the availability of officers. Crosswalk enforcement can be conducted with one officer up to seven officers. Team leaders will have to assign roles to each team member based upon officer and equipment availability.

Basic- Uncontrolled crosswalks can be enforced by a single officer in a squad car. The officer will rely on actual pedestrian crossings to determine crosswalk violations and will pursue the offenders.

High Visibility - Operations can be conducted with up to 7 officers per team. Locations that do not have significant pedestrian traffic will require 1-2 officers to act as decoy pedestrians. Decoy pedestrians are plain clothed officers that cross the street within the crosswalk. Decoys will cross the street in a manner that is obvious to drivers that a crossing is taking place and provide enough distance for drivers to stop safely. The additional officers will set up in their squad cars so that they are visible to drivers and can observe when a violation takes place. The officer will pursue the offender, issue a citation, and provide the driver with an information flyer if available.

Equipment

The equipment used in a crosswalk enforcement operation will vary based upon availability at the District level.

Basic – No specialized equipment necessary.

High Visibility – The following equipment can be incorporated if available:

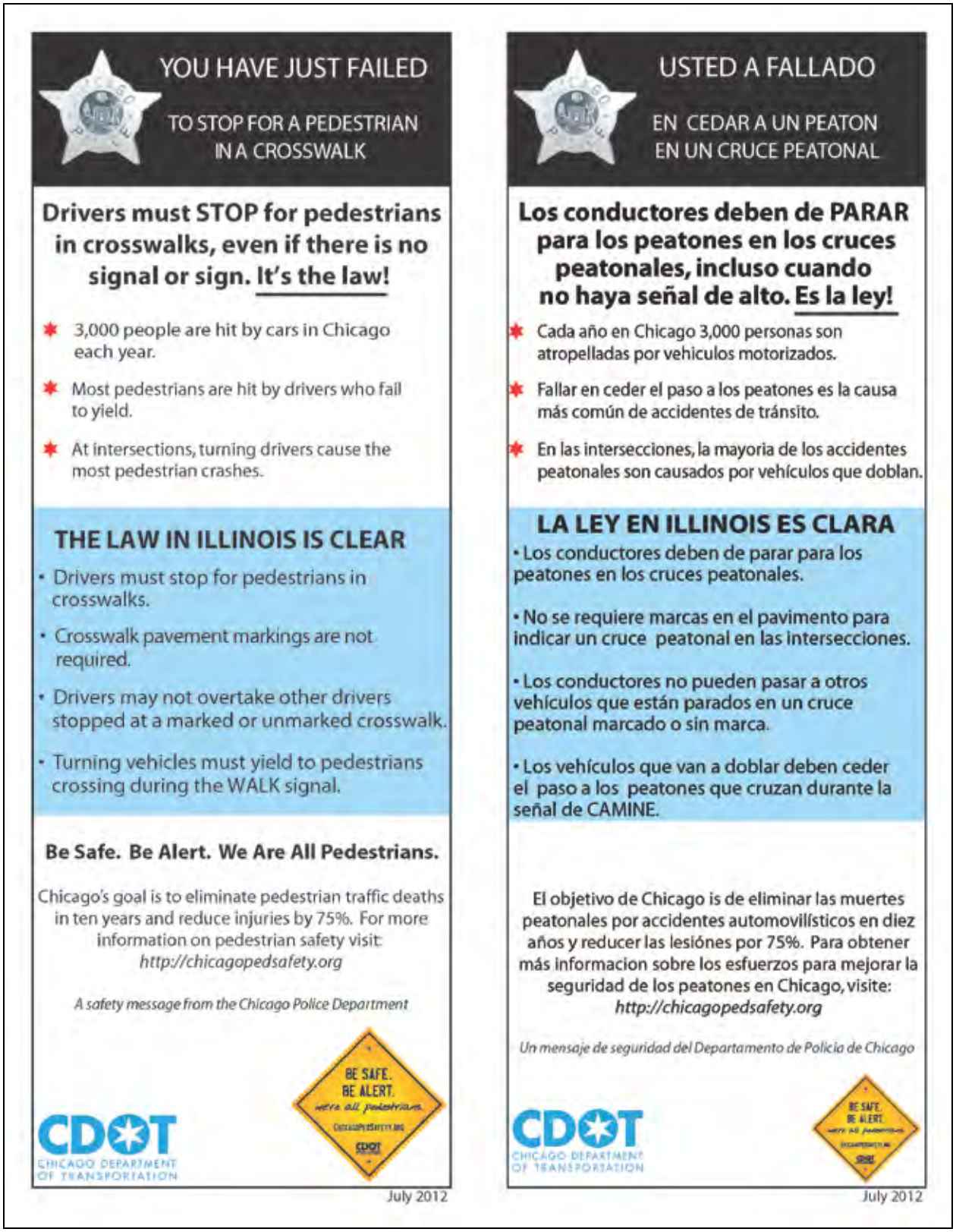
- Measuring Wheel – Used to measure the "dilemma zone." The dilemma zone is the distance in which all drivers can reasonably be expected to stop for pedestrians in a crosswalk. The table below shows the dilemma zone distance from the front edge of the crosswalk. If a measuring wheel is not available the distance can be

determined by walking with a measure of 3 feet per pace. **Table 1** below shows the lengths of the dilemma zone by posted speed.

Table 1: Dilemma Zone	
Posted Speed (mph)	Length (feet)
20	73
25	102
30	141
35	183
40	234

Crosswalk Enforcement Posted Sign
Source: TYLI

- Orange Flags/Cones – Used to mark the dilemma zone. Place orange flags, cones, or other identifiers in the park way (on the ground, wrapped around a tree, etc…) so that pursuing officers can clearly see if a driver is beyond the dilemma zone. If a driver is beyond the orange flag/cone when the pedestrian first steps into the crosswalk, then the driver should be pulled over.
- Enforcement Sandwich Signs - If available, sandwich signs should be placed in each direction of travel and clearly visible so drivers and the community are aware that crosswalk enforcement is taking place. The presence of the sign provides reinforcement to everyone that pedestrian safety and crosswalk enforcement is a priority for CPD and CDOT.
- Pedestrian Safety Information Flyers – Information flyers may be available at district headquarters and can be distributed to drivers who violate the crosswalk laws.



YOU HAVE JUST FAILED

TO STOP FOR A PEDESTRIAN IN A CROSSWALK

Drivers must STOP for pedestrians in crosswalks, even if there is no signal or sign. It's the law!

- 3,000 people are hit by cars in Chicago each year.
- Most pedestrians are hit by drivers who fail to yield.
- At intersections, turning drivers cause the most pedestrian crashes.

THE LAW IN ILLINOIS IS CLEAR

- Drivers must stop for pedestrians in crosswalks.
- Crosswalk pavement markings are not required.
- Drivers may not overtake other drivers stopped at a marked or unmarked crosswalk.
- Turning vehicles must yield to pedestrians crossing during the WALK signal.

Be Safe. Be Alert. We Are All Pedestrians.

Chicago's goal is to eliminate pedestrian traffic deaths in ten years and reduce injuries by 75%. For more information on pedestrian safety visit: *http://chicagopedsafety.org*

A safety message from the Chicago Police Department

CDOT CHICAGO DEPARTMENT OF TRANSPORTATION

BE SAFE. BE ALERT. we're all pedestrians. CDOT

July 2012

USTED A FALLADO

EN CEDAR A UN PEATON EN UN CRUCE PEATONAL

Los conductores deben de PARAR para los peatones en los cruces peatonales, incluso cuando no haya señal de alto. Es la ley!

- Cada año en Chicago 3,000 personas son atropelladas por vehiculos motorizados.
- Fallar en ceder el paso a los peatones es la causa más común de accidentes de tránsito.
- En las intersecciones, la mayoria de los accidentes peatonales son causados por vehículos que doblan.

LA LEY EN ILLINOIS ES CLARA

- Los conductores deben de parar para los peatones en los cruces peatonales.
- No se requiere marcas en el pavimento para indicar un cruce peatonal en las intersecciones.
- Los conductores no pueden pasar a otros vehículos que están parados en un cruce peatonal marcado o sin marca.
- Los vehículos que van a doblar deben ceder el paso a los peatones que cruzan durante la señal de CAMINE.

El objetivo de Chicago is de eliminar las muertes peatonales por accidentes automovilísticos en diez años y reducer las lesiónes por 75%. Para obtener más informacion sobre los esfuerzos para mejorar la seguridad de los peatones en Chicago, visite: *http://chicagopedsafety.org*

Un mensaje de seguridad del Departamento de Policia de Chicago

CDOT CHICAGO DEPARTMENT OF TRANSPORTATION

BE SAFE. BE ALERT.

July 2012

Crosswalk Enforcement Protocol

The crosswalk enforcement protocol provides guidance to officers and District Supervisors. The guidance should be used as starting point and may be modified based upon site and situation characteristics.

Basic – Conducted by a single officer.

1. Squad car will be parked in clear view of the crosswalk being enforced so that the officer can witness a violation.
2. After witnessing a violation, the officer will pursue the offender and pull over so as not to impede the flow of traffic.
3. Officer will issue a citation for the appropriate violation.
4. Officer will explain the violation and inform the offender that the Chicago Police Department is operating under an initiative to improve pedestrian safety.

High Visibility – Conducted with multiple officers, squad cars and crosswalk equipment. Crosswalks should have a high amount of vehicle traffic so that violations can be enforced and also observed by non-violators.

The purpose of the high visibility operation is to make it obvious that drivers are required to stop for pedestrians. This is achieved placing the appropriate signage and having squad cars in full view. The visibility helps to increase the number of tickets that are upheld in the courts and to let all drivers, even those just passing by, know that the CPD is enforcing violations that compromise pedestrian safety.

1. If sandwich signs are available, set them up in both directions of travel beyond the dilemma zone or approximately one block from the crosswalk.
2. If a measuring wheel and orange flags/cones are available, measure and mark the appropriate distance for the dilemma zone based upon the above table.
3. Park squad cars in clear view of the crosswalk being enforced so that the officer can witness a violation.
4. Decoy pedestrians (plain clothed officers) will cross the street one at a time. To maximize operations, decoys can cross the street in opposite directions of each other to efficiently target multiple directions of traffic. It is important that the decoy look towards the approaching driver so that it is clear that they are attempting to cross the street. If the driver does yield, then the decoy will cross the street. If the driver does not yield, then the decoy will step back toward the curb.
5. After witnessing a violation, the squad car officer will pursue the offender and pull over so as not to impede the flow of traffic.
6. Officer will issue a citation for the appropriate violation.
7. Officer will explain the violation and inform the offender that the CPD is operating an initiative to improve pedestrian safety.
8. If available, the officer will distribute the Pedestrian Safety Information Flyer to the driver.

9. The pursuing officer will keep a record of the number of offenders that are pulled over and enter into the CPD database. This step is important to gauge the impact that the operation is having on driver behavior.

Appendix G
Chicago Police Department Pedestrian Safety Bulletin

The following bulletin was prepared by the Chicago Police Department with assistance from T.Y. Lin International for distribution to officers. The bulletin provides information on pedestrian safety, crosswalks, crashes, and resources for officers responsible for enforcing traffic laws where pedestrians are present.

Education and Training Division
Distribution: All Sworn Members
Contributor(s): P.O. Jon Patterson
Release Date: December 2012

ETB# 12-10

PEDESTRIAN SAFETY

In the City of Chicago, thousands of pedestrians are involved in traffic crashes every year. **Pedestrian crashes are avoidable.** Drivers have the greatest responsibility to avoid traffic crashes. However, pedestrians have a responsibility to exercise due caution. Speeding vehicles are more likely to cause serious injuries if they are involved in pedestrian crashes. Speed enforcement and high visibility enforcement reduce the number of pedestrian crashes.

GUIDELINES

When responding to the scene of a pedestrian crash, immediately secure the scene and summon emergency equipment, if needed. When completing the Illinois Traffic Crash Report, the striking vehicle is "Unit 1" unless the preliminary investigation reveals that the striking vehicle is not "at fault." Otherwise, the "at fault" vehicle is "Unit 1." For reporting purposes, the "at fault" vehicle does NOT necessarily have to strike another vehicle or a pedestrian.

When completing the Illinois Traffic Crash Report, do not use the letter "X" or any other marks to fill in the input boxes. If any information is not applicable, then leave the box blank. Use the code "9" or "99" only if it is an applicable code for the input box. Accurate, complete, and timely reports help authorities to identify dangerous street conditions and make pedestrian safety improvements.

Every box on the Illinois Traffic Crash Report is important. However, the key fields include:

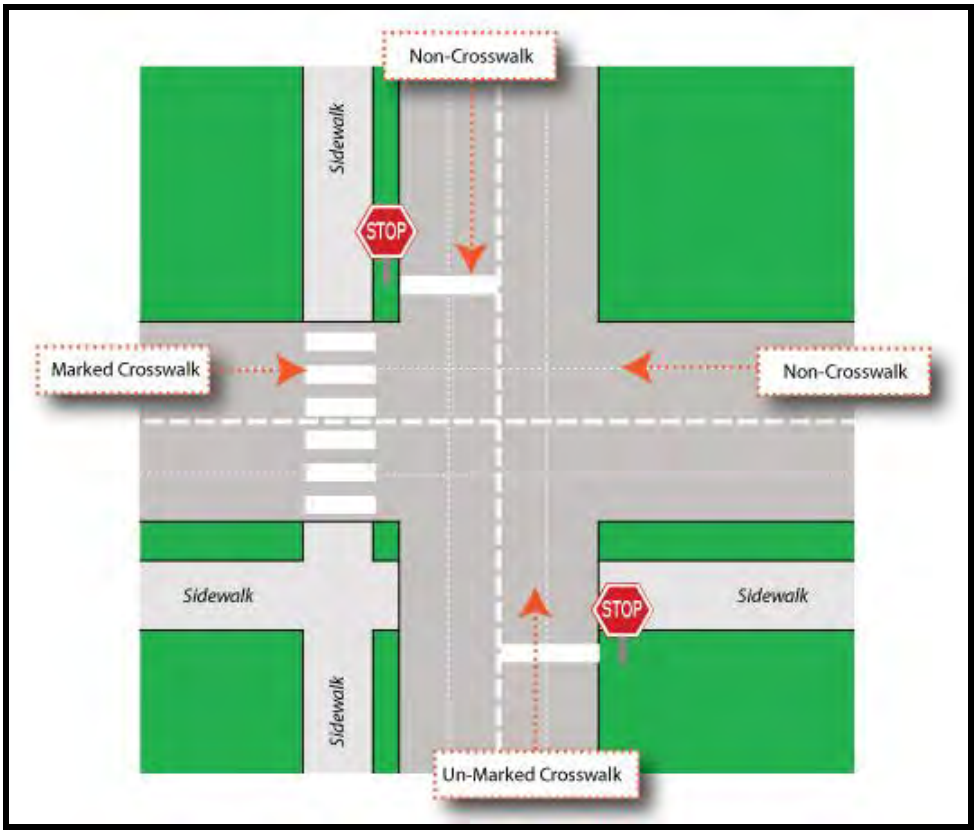
- At intersection,
- Crash location,
- Crash type,
- Date of crash,
- Direction of travel,
- Injury,
- Intersection related,
- Ped/Pedal action,
- Ped/Pedal location,
- RD number,
- Unit type, and
- Vehicle maneuver.

If there are no injuries and no vehicle has to be towed due to damages caused by the crash, then the crash is classified as Type A. If the crash involves death, injury, and/or a vehicle is towed from the scene due to damages caused by the crash, then the crash is classified as Type B. For both Type A and Type B crashes, fill in all of the boxes and complete the entire Illinois Traffic Crash Report.

CROSSWALKS

Crosswalks are defined as the extensions or prolongations of the sidewalk. **Legal crosswalks may be marked or unmarked.** Pedestrians have the same right-of-way at marked and unmarked crosswalks. A pedestrian enters the crosswalk when one foot leaves the sidewalk. Portions of the street that do not extend the sidewalk are NOT pedestrian crosswalks.

Not all crosswalks are controlled by traffic lights or traffic signs. **Legal crosswalks may be controlled or uncontrolled.** At controlled and uncontrolled crosswalks, vehicles are required to yield the right-of-way to pedestrians.



PEDESTRIAN CRASHES

Children are most likely to be involved in crashes. Senior citizens and children have the highest risk of being killed in crashes. About twenty-five percent of all victims of fatal and serious injuries were under nineteen years old. More than seventy-five percent of crashes occur near intersections. Half of all crashes occur on busy streets. Eighty-five percent of crashes occur near parks or schools. More crashes occur in high-crime areas.

School dismissals coincide with the highest number of crashes. **In pedestrian crashes, failing to yield is the most common driver violation.** Furthermore, vehicle turning movements are very dangerous for pedestrians.

Speed enforcement saves lives and reduces the number of pedestrian crashes. Special high visibility enforcement teams conduct traffic enforcement missions to improve the pedestrian environment. District Commanders may also establish their own teams to conduct high visibility operations in their districts. No special equipment is necessary to conduct high visibility enforcement missions. However, enforcement teams may use "Crosswalk Enforcement" signs, "Pedestrian Safety Information" flyers, orange safety cones, and measuring wheels.

High Crash Corridors in Chicago

Street	Boundary
79TH	M. L. King to Stony Island
Cicero	Harrison to Chicago
63RD	California to Ashland
Western	71ST to 63RD
95TH	Eggleston to M.L King
Fullerton	Central to Cicero
79TH	Ashland to Halsted
Madison	Central to Pulaski
North	Kostner to Kedzie
Chicago	Keeler to Kedzie
Devon	Sacramento to Leavitt
Broadway	Montrose to Balmoral

Source: "City of Chicago 2011 Pedestrian Crash Analysis"

VIOLATIONS

Where stop signs are in place at a plainly marked crosswalk at an intersection or between intersections, pedestrians within or entering the crosswalk at either edge of the roadway shall have the right-of-way over vehicles stopped in obedience to such signs. Drivers of vehicles having so yielded the right-of-way to pedestrians entering or within the nearest crosswalk at an intersection shall also yield the right-of-way to pedestrians within any other crosswalk at the intersection (*See MCC 9-24-030, Crosswalks*).

When the movement of traffic is not controlled by traffic-control devices, a police officer or traffic control aide, the operator of a vehicle shall stop and yield the right-of-way to a pedestrian crossing the roadway within a crosswalk when the pedestrian is upon half of the roadway which the vehicle is traveling or when the pedestrian is approaching so closely from the opposite half of the roadway as to be in danger (See *MCC 9-24-050, Pedestrians in roadway to have right-of-way; 625 ILCS 5/11-1002, Pedestrians right-of-way at crosswalks*).

Vehicle traffic, including vehicles turning right or left, shall yield the right of way to other vehicles and to pedestrians lawfully within the intersection or adjacent crosswalk at the time such signal indication is exhibited (See *MCC 9-8-020, Traffic-control signal legend.*)

Overtaking at the crosswalk is unlawful and dangerous. Whenever any vehicle is stopped at a marked crosswalk or at any unmarked crosswalk at an intersection to permit a pedestrian to cross the roadway, the driver of any other vehicle approaching from the rear shall NOT overtake or pass such stopped vehicle (*See MCC 9-36-060, Overtaking at crosswalk*).

Notwithstanding any traffic-control signal indication to proceed, no operator of a vehicle shall enter an intersection or crosswalk unless there is sufficient space beyond such intersection or crosswalk, in the direction in which the vehicle is proceeding, to accommodate the vehicle without obstructing the passage of other vehicular traffic or pedestrians (*See MCC 9-40-120, Obstruction of intersection on crosswalk prohibited*.)

Traffic control devices: all signs, signals, markings, and devices placed or erected under authority of the city council for the purpose of regulating, warning, or guiding traffic.

Right-of-way: the right of a vehicle or pedestrian to proceed in a lawful manner in preference to another vehicle or pedestrian approaching under such circumstances of direction, speed and proximity as to give rise to danger or collision unless one grants precedence to the other.

Speeding vehicles are more likely to cause serious injuries. The absolute statutory urban speed limit is 30 miles per hour in streets and 15 miles per hour in alleys. The absolute statutory nonurban speed limit is 55 miles per hour (*See MCC 9-12-070, Speed Limits*).

Police vehicles have been afforded special privileges and exemptions when engaging in emergency response calls and motor vehicle pursuits. But during emergency vehicle operations, members are required to adhere to basic traffic-safety practices and yield the right-of-way to all pedestrian traffic.

Pedestrians are required to use crosswalks responsibly and they have the duty of exercising due care (*See MCC 9-60-120, Pedestrians to exercise due care*). Pedestrians facing a special pedestrian-control signal illuminated with “Walk” or the symbolic symbol for walk may proceed across the roadway. When such signal is extinguished, no pedestrian facing the signal indication shall enter the roadway (*See MCC 9-8-050, Special pedestrian-control signals*).

SERVICE REQUESTS

If situations such as cave-ins or non-functioning traffic signals pose public safety threats and require immediate attention, then inform the Office of Emergency Management and Communications (OEMC). However, if situations do NOT require immediate attention but the crosswalk could be made safe for pedestrians, then complete the City Service Request (CSR) form. The CSR can be initiated by police officers or citizens. Only one CSR will be completed for each service request need except in the case of multiple abandoned vehicles, when a request form will be completed for each vehicle.

KEY POINTS

- Crosswalks are the extensions or prolongations of the sidewalk.
- Crosswalks may be marked or unmarked.
- Crosswalks may be controlled or uncontrolled.
- Speed enforcement and high visibility enforcement reduce the number of pedestrian crashes.
- Drivers must stop and yield to pedestrians in the crosswalk.
- If a crosswalk requires immediate attention because it poses a public safety threat, then notify the Office of Emergency Management and Communications (OEMC) right away. Otherwise, submit a City Service Request (CSR) form.

RESOURCES

City of Chicago 2011 Pedestrian Crash Analysis. 2011. Chicago Department of Transportation.

City Service Requests. 2009. Special Order S02-03-04. Chicago Police Department.

Crashes - Fatalities or Life Threatening Injury. 1998. General Order G04-07-02. Chicago Police Department.

Emergency Use of Department Vehicles. 2002. General Order G03-03. Chicago Police Department.

Illinois Traffic Crash Report. 2012. Training Bulletin ETB12-04. Chicago Police Department.

Illinois Traffic Crash Report SR1050 Instruction Manual for Law Enforcement Agencies. 2009. Illinois Department of Transportation.

Preliminary Investigations - Required Immediate Notifications. 2012. Special Order S04-21-01. Chicago Police Department.

Preliminary Investigations - Traffic Crashes. 2009. General Order G04-07. Chicago Police Department.

Processing Illinois Traffic Crash Reports. 2012. Special Order S04-07-08. Chicago Police Department.

Appendix H
State of Illinois and City of Chicago Regulations Regarding Driver and Pedestrian Actions

The following codes were compiled during the pedestrian safety awareness campaign to identify the laws that govern conduct related to driver and pedestrian actions at signalized and unsignalized intersections.

Contents

Illinois Vehicle Code

VEHICLES (625 ILCS 5/)

ARTICLE III – TRAFFIC SIGNS, SIGNALS AND MARKNGS

(625 ILCS 5/11-306) (from Ch. 95 1/2, par. 11-306)

Sec. 11-306. Traffic-control signal legend. Whenever traffic is controlled by traffic-control signals exhibiting different colored lights or color lighted arrows, successively one at a time or in combination, only the colors green, red and yellow shall be used, except for special pedestrian signals carrying a word legend, and the lights shall indicate and apply to drivers of vehicles and pedestrians as follows:

(a) Green indication.

1. Vehicular traffic facing a circular green signal may proceed straight through or turn right or left unless a sign at such place prohibits either such turn. Vehicular traffic, including vehicles turning right or left, shall yield the right of way to other vehicles and to pedestrians lawfully within the intersection or an adjacent crosswalk at the time such signal is exhibited.

2. Vehicular traffic facing a green arrow signal, shown alone or in combination with another indication, may cautiously enter the intersection only to make the movement indicated by such arrow, or such other movement as is permitted by other indications shown at the same time. Such vehicular traffic shall yield the right of way to pedestrians lawfully within an adjacent crosswalk and to other traffic lawfully using the intersection.

3. Unless otherwise directed by a pedestrian-control signal, as provided in Section 11-307, pedestrians facing any green signal, except when the sole green signal is a turn arrow, may proceed across the roadway within any marked or unmarked crosswalk.

(b) Steady yellow indication.

2. Pedestrians facing a steady circular yellow or yellow arrow signal, unless otherwise directed by a pedestrian-control signal as provided in Section 11-307, are thereby advised that there is insufficient time to cross the roadway before a red indication is shown and no pedestrian shall then start to cross the roadway.

(c) Steady red indication.

3.……After stopping, the driver shall yield the right of way to any vehicle in the intersection or approaching on another roadway so closely as to constitute an immediate hazard during the time such driver is moving across or within the intersection or junction or roadways. Such driver shall yield the right of way to pedestrians within the intersection or an adjacent crosswalk.

4. Unless otherwise directed by a pedestrian-control signal as provided in Section 11-307, pedestrians facing a steady circular red or red arrow signal alone shall not enter the roadway.

(625 ILCS 5/11-307) (from Ch. 95 1/2, par. 11-307)

Sec. 11-307. Pedestrian-control signals. Whenever special pedestrian-control signals exhibiting the words "Walk" or "Don't Walk" or the illuminated symbols of a walking person or an upraised palm are in place such signals shall indicate as follows:

(a) Walk or walking person symbol. Pedestrians facing such signal may proceed across the roadway in the direction of the signal, and shall be given the right of way by the drivers of all vehicles.

(b) Don't Walk or upraised palm symbol. No pedestrian shall start to cross the roadway in the direction of such signal, but any pedestrian who has partly completed his crossing on the Walk signal or walking person symbol shall proceed to a sidewalk or safety island while the "Don't Walk" signal or upraised palm symbol is illuminated, steady, or flashing. (Source: P.A. 81-553.)

ARTICLE IX – RIGHT-OF-WAY

Sec. 11-903. Vehicles entering stop crosswalk.

Where stop signs or flashing red signals are in place at an intersection or flashing red signals are in place at a plainly marked crosswalk between intersections, drivers of vehicles shall stop before entering the nearest crosswalk and pedestrians within or entering the crosswalk at either edge of the roadway shall have the right-of-way over vehicles so stopped. Drivers of vehicles having so yielded the right-of-way to pedestrians entering or within the nearest crosswalk at an intersection shall also yield the right-of-way to pedestrians within any other crosswalk at the intersection.
(Source: P.A. 76-1586.)

ARTICLE X. PEDESTRIANS' RIGHTS AND DUTIES

(625 ILCS 5/11-1001) (from Ch. 95 1/2, par. 11-1001)

Sec. 11-1001. Pedestrian obedience to traffic control devices and traffic regulations.

(a) A pedestrian shall obey the instructions of any official traffic control device specifically applicable to him, unless otherwise directed by a police officer.

(b) Pedestrians shall be subject to traffic and pedestrian control signals provided in Sections 11-306 and 11-307 of this Chapter, but at all other places pedestrians shall be accorded the privileges and shall be subject to the restrictions stated in this Article.
(Source: P.A. 76-1734.)

(625 ILCS 5/11-1002) (from Ch. 95 1/2, par. 11-1002)

Sec. 11-1002. Pedestrians' right-of-way at crosswalks.

(a) When traffic control signals are not in place or not in operation the driver of a vehicle shall stop and yield the right-of-way to a pedestrian crossing the roadway within a crosswalk when the pedestrian is upon the half of the roadway upon which the vehicle is traveling, or when the pedestrian is approaching so closely from the opposite half of the roadway as to be in danger.

(b) No pedestrian shall suddenly leave a curb or other place of safety and walk or run into the path of a moving vehicle which is so close as to constitute an immediate hazard.

(c) Paragraph (a) shall not apply under the condition stated in Section 11-1003(b).

(d) Whenever any vehicle is stopped at a marked crosswalk or at any unmarked crosswalk at an intersection to permit a pedestrian to cross the roadway, the driver of any other vehicle approaching from the rear shall not overtake and pass such stopped vehicle.

(e) Whenever stop signs or flashing red signals are in place at an intersection or at a plainly marked crosswalk between intersections, drivers shall yield right-of-way to pedestrians as set forth in Section 11-904 of this Chapter.
(Source: P.A. 96-1165, eff. 7-22-10.)

Sec. 11-1002.5. Pedestrians' right-of-way at crosswalks; school zones.

(a) For the purpose of this Section, "school" has the meaning ascribed to that term in Section 11-605.

On a school day when school children are present and so close thereto that a potential hazard exists because of the close proximity of the motorized traffic and when traffic control signals are not in place or not in operation, the driver of a vehicle shall stop and yield the right-of-way to a pedestrian crossing the roadway within a crosswalk when the pedestrian is upon the half of the roadway upon which the vehicle is traveling, or when the pedestrian is approaching so closely from the opposite half of the roadway as to be in danger.

(625 ILCS 5/11-1003) (from Ch. 95 1/2, par. 11-1003)

Sec. 11-1003. Crossing at other than crosswalks.

(a) Every pedestrian crossing a roadway at any point 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.

(b) Any pedestrian crossing a roadway at a point where a pedestrian tunnel or overhead pedestrian crossing has been provided shall yield the right-of-way to all vehicles upon the roadway.

(c) Between adjacent intersections at which traffic-control signals are in operation pedestrians shall not cross at any place except in a marked crosswalk.

(d) No pedestrian shall cross a roadway intersection diagonally unless authorized by official traffic-control devices; and, when authorized to cross diagonally, pedestrians shall cross only in accordance with the official traffic-control devices pertaining to such crossing movements.

(e) Pedestrians with disabilities may cross a roadway at any point other than within a marked crosswalk or within an unmarked crosswalk where the intersection is physically inaccessible to them but they shall yield the right-of-way to all vehicles upon the roadway.
(Source: P.A. 88-685, eff. 1-24-95.)

(625 ILCS 5/11-1003.1) (from Ch. 95 1/2, par. 11-1003.1)

Sec. 11-1003.1. Drivers to exercise due care. Notwithstanding other provisions of this Code or the provisions of any local ordinance, every driver of a vehicle shall exercise due care to avoid colliding with any pedestrian, or any person operating a bicycle or other device propelled by human power and shall give warning by sounding the horn when necessary and shall exercise proper precaution upon observing any child or any obviously confused, incapacitated or intoxicated person.
(Source: P.A. 82-132.)
(625 ILCS 5/11-1004) (from Ch. 95 1/2, par. 11-1004)

Sec. 11-1004. Pedestrian with disabilities; right-of-way. The driver of a vehicle shall yield the right-of-way to any pedestrian with clearly visible disabilities.
(Source: P.A. 88-685, eff. 1-24-95.)

(625 ILCS 5/11-1005) (from Ch. 95 1/2, par. 11-1005)

Sec. 11-1005. Pedestrians to use right half of crosswalks.

Pedestrians shall move, whenever practicable, upon the right half of crosswalks.
(Source: P.A. 76-1586.)

(625 ILCS 5/11-1009) (from Ch. 95 1/2, par. 11-1009)

Sec. 11-1009. Pedestrians yield to authorized emergency vehicles. Upon the immediate approach of an authorized emergency vehicle making use of an audible signal and visual signals meeting the requirements of Section 12-217 of this Chapter, or of a police vehicle properly and lawfully making use of an audible signal only, every pedestrian shall yield the right-of-way to the authorized emergency vehicle.
(Source: P.A. 79-857.)

9-8-020 Traffic-control signal legend.

Whenever traffic is controlled by traffic-control devices exhibiting steady colored lights, successively one at a time, in combination or with arrows, the following colors only shall be used and the signals shall indicate and apply to drivers of vehicles and pedestrians as follows:

(a) *Green Indication.*

(1) Vehicular traffic facing a circular green signal may proceed straight through or turn right or left except as such movement is modified by lane-control signs, turn prohibition signs, lane markings, or roadway design. Vehicular traffic, including vehicles turning right or left, shall yield the right-of-way to other vehicles and to pedestrians lawfully within the intersection or an adjacent crosswalk at the time such signal indication is exhibited.

(2) Vehicular traffic facing a green arrow signal, shown alone or in combination with another indication, may cautiously enter the intersection only to make the movement indicated by such arrow or such other movement as is permitted by other indications shown at the same time. Such vehicular traffic shall yield the right-of-way to pedestrians lawfully within an adjacent crosswalk and to other traffic lawfully using the intersection.

(3) Unless otherwise directed by a pedestrian-control signal as provided in Section 9-8-050, pedestrians facing any green signal, except when the sole green signal is a turn arrow, may proceed across the roadway within any marked or unmarked crosswalk.

(b) *Steady Yellow Indication.*

(1) Vehicular traffic facing a steady circular yellow or yellow arrow signal is thereby warned that the related green movement is being terminated or that a red indication will be exhibited immediately thereafter when vehicular traffic shall not enter the intersection.

(2) Pedestrians facing a steady circular yellow or yellow arrow signal, unless otherwise directed by a pedestrian-control signal as provided in Section 9-8-050, are thereby advised that there is insufficient time to cross the roadway before a red indication is shown, and no pedestrian shall then start to cross the roadway.

(c) *Steady Red Indication.*

(1) Except as provided in Section 9-16-030, vehicular traffic facing a steady circular red signal alone shall stop at a clearly marked stop line, but if none, before entering the crosswalk on the near side of the intersection, or if none, then before entering the intersection and shall remain standing until an indication to proceed is shown.

(2) Except as provided in Section 9-16-030, vehicular traffic facing a steady red arrow signal shall not enter the intersection to make the movement indicated by the arrow and, unless entering the intersection to make a movement permitted by another signal, shall stop at a clearly marked stop line, but if none, before entering the crosswalk on the near side of the intersection, or if none, then before entering the intersection and shall remain standing until an indication permitting the movement indicated by such red arrow is shown.

(Added Coun. J. 7-12-90, p. 18634)

9-8-050 Special pedestrian-control signals.

Whenever special pedestrian-control signals are in place, such signals shall indicate as follows:

(a) Walk or Symbolic Walk Figure. Pedestrians facing such signal indication when illuminated may proceed across the roadway in the direction of the indication and shall be given the right-of-way by the operator of any vehicle. When such signal indication is extinguished, no pedestrian facing the signal indication shall enter the roadway.

(b) Don't Walk or Symbolic Don't Walk Figure. No pedestrian facing such signal indication which is illuminated or flashing shall start to cross the roadway in the direction of the indication; provided, however, any pedestrian who has partially completed his crossing on the "Walk" signal indication shall proceed to a sidewalk or safety zone while the "Don't Walk" signal indication is illuminated.

(Added Coun. J. 7-12-90, p. 18634)

9-16-030 Turns on red signals.

(a) Except as provided in subsection (c), the driver of a vehicle may turn right when facing a steady red signal; provided, however, he may do so only from the lane closest to the right-hand curb or edge of roadway, must come to a full stop and must yield the right-of-way to pedestrians and to other traffic lawfully using the intersection.

(b) Except as provided in subsection (c), the driver of a vehicle on a one-way roadway, facing a steady red signal, may turn left into an intersecting one-way roadway in which traffic travels to the left; provided, however, he may do so only from the lane closest to the left-hand curb or edge of roadway, must come to a full stop and must yield the right-of-way to pedestrians and to other traffic lawfully using the intersection.

(c) Drivers may not turn left or right on a steady red signal when official traffic-control devices have been erected indicating that such turns are prohibited.

(Added Coun. J. 7-12-90, p. 18634)

9-24-030 Crosswalks—Pedestrians to have right-of-way.

Where stop signs are in place at a plainly marked crosswalk at an intersection or between intersections, pedestrians within or entering the crosswalk at either edge of the roadway shall have the right-of-way over vehicles stopped in obedience to such signs. Drivers of vehicles having so yielded the right-of-way to pedestrians entering or within the nearest crosswalk at an intersection shall also yield the right-of-way to pedestrians within any other crosswalk at the intersection.

(Added Coun. J. 7-12-90, p. 18634)

9-24-050 Pedestrians in roadway to have right-of-way when.

When the movement of traffic is not controlled by traffic-control devices, a police officer or traffic control aide, the operator of a vehicle shall stop and yield the right-of-way to a pedestrian crossing the roadway within a crosswalk when the pedestrian is upon the half of the roadway upon which the vehicle is traveling or when the pedestrian is approaching so closely from the opposite half of the roadway as to be in danger.

(Added Coun. J. 7-12-90. p. 18634)

9-24-060 Right-of-way at sidewalks.

The driver of a vehicle emerging from an alley, driveway or building shall stop the vehicle immediately prior to driving onto any sidewalk or sidewalk area extending across an alleyway, yield the right-of-way to any pedestrian as may be necessary to avoid collision and, upon entering the roadway, shall yield the right-of-way to all vehicles approaching on the roadway.

(Added Coun. J. 7-12-90, p. 18634)

9-24-100 Blind persons to have right-of-way when.

(a) Notwithstanding any other provision of this chapter, any blind person who is carrying in a raised or extended position a cane which is white in color, or white tipped in red, or who is being guided by a dog shall have the right-of-way in crossing any roadway.

(b) The driver of a vehicle approaching the place where a blind person carrying a cane as described in subsection (a) or guided by a dog is crossing a roadway shall bring his vehicle to a full stop and before proceeding shall take such precautions as may be necessary to avoid injury to the blind person.

(c) The provisions of this section shall not apply to a blind person who is neither carrying a cane as described in subsection (a) nor guided by a dog, but the other provisions of this chapter relating to pedestrians shall then be applicable to such person.

(Added Coun. J. 7-12-90, p. 18634)

9-36-060 Overtaking at crosswalks.

Whenever any vehicle is stopped at a marked crosswalk or at any unmarked crosswalk at an intersection to permit a pedestrian to cross the roadway, the driver of any other vehicle approaching from the rear shall not overtake or pass such stopped vehicle.

(Added Coun. J. 7-12-90, p. 18634)

9-40-120 Obstruction of intersection or crosswalk prohibited.

Notwithstanding any traffic-control signal indication to proceed, no operator of a vehicle shall enter an intersection or crosswalk unless there is sufficient space beyond such intersection or crosswalk, in the direction in which the vehicle is proceeding, to accommodate the vehicle without obstructing the passage of other vehicular traffic or pedestrians. Any person who violates this section shall be subject to a fine of $200.00 and may be required to perform reasonable public service.

(Added Coun. J. 7-12-90, p. 18634; Amend Coun. J. 10-7-98, p. 78921; Amend Coun. J. 11-6-02, p. 96501, § 5; Amend Coun. J. 12-4-02, p. 100729, § 5; Amend Coun. J. 5-26-04, p. 24880, § 1)

9-60-010 Crosswalks authorized—Crossing between intersections prohibited when.

(a) The commissioner of transportation is hereby authorized to designate and maintain by appropriate lines upon the surface of roadway, crosswalks at intersections where in his opinion there is particular danger to pedestrians crossing the roadway and at such other places as he may deem necessary.

(b) Whenever, upon the basis of an engineering or traffic investigation upon any street, it is determined that pedestrian crossings between intersections shall be prohibited in the interest of public safety, pedestrians shall not cross between intersections except where there may be a marked crosswalk. Such regulations against pedestrian crossing between intersections shall be effective when appropriate signs giving notice thereof are erected.

(Added Coun. J. 7-12-90. p. 18634; Amend Coun. J. 12-11-91, p. 10832)

9-60-020 Through streets.

No pedestrian shall cross a roadway other than in a crosswalk on any through street.

(Added Coun. J. 7-12-90, p. 18634)

9-60-030 Limited access streets and highways—Public pedestrian tunnels and bridges.

(a) No pedestrian shall cross the roadway of a limited-access street or highway other than by means of those facilities which have been constructed as pedestrian crossings or at those points where marked crosswalks have been provided.

(b) No pedestrian shall cross a roadway where a public pedestrian tunnel or bridge has been provided other than by way of the tunnel or bridge within a section to be determined by the commissioner of transportation and to be so designated by the erection of appropriate signs or fencing.

(Added Coun. J. 7-12-90, p. 18634; Amend Coun. J. 12-11-91, p. 10832)

9-60-040 Railroad grade crossing and bridges.

(a) No pedestrian shall pass through, around, over, or under any crossing gate or barrier at a railroad grade crossing or bridge while such gate or barrier is closed or is being opened or closed.

(b) No pedestrian shall enter or remain upon any bridge or approach thereto beyond the bridge signal, gate or barrier after a bridge operation signal indication has been given.

(Added Coun. J. 7-12-90, p. 18634)

9-60-050 Pedestrian to yield right-of-way when.

(a) Every pedestrian crossing a roadway at any point other than within a marked crosswalk shall yield the right-of-way to all vehicles upon the roadway.

(b) The foregoing rules in this section have no application under the conditions stated in Section 9-60-010 when pedestrians are prohibited from crossing at certain designated places.

(Added Coun. J. 7-12-90, p. 18634)

9-60-060 Pedestrian crossing.

(a) No pedestrian shall cross a roadway at any place other than by a route at right angels to the curb or by the shortest route to the opposite curb except in a marked crosswalk.

(b) No pedestrian shall suddenly leave a curb or other place of safety and walk or run into the path of a vehicle which is so close that it is impossible for the driver to yield.

(Added Coun. J. 7-12-90, p. 18634)

9-60-070 Use of crosswalk.

Pedestrians shall move whenever practicable upon the right side of crosswalks.

(Added Coun. J. 7-12-90, p. 18634)

9-60-080 Walking along roadways.

(a) Where crosswalks are provided it shall be unlawful for a pedestrian to walk along and upon an adjacent roadway.

(b) Where sidewalks are not provided any pedestrian walking along and upon a roadway shall when practicable walk only on the left side of the roadway or its shoulder facing traffic that may approach from the opposite direction.

(Added Coun. J. 7-12-90, p. 18634)

9-60-100 Traffic-control signals.

Pedestrians shall be subject to traffic-control signals as provided in Sections 9-8-020 and 9-8-050, but at all other places shall be granted those rights and be subject to the restrictions stated in this chapter.

(Added Coun. J. 7-12-90, p. 18634)

9-60-120 Imitation of blind persons prohibited.

It shall be unlawful for any person, except persons wholly or partially blind, to carry or use on the public streets of the city any cane or walking stick which is white in color, or white with a red end on the bottom.

(Added Coun. J. 7-12-90, p. 18634)

9-60-120 Pedestrians to exercise due care.

Nothing in this chapter shall relieve a pedestrian from the duty of exercising due care.

(Added Coun. J. 7-12-90, p. 18634)

Appendix I
Chicago Police Department
Pedestrian Safety E-Learning Course Screen Shots

The following screen shots are slides from a Pedestrian Safety E-Learning Course prepared for the Chicago Police Department officers. The E-Learning Course covers the same areas outlined in the Pedestrian Safety Bulletin and provides a review at the end of the course.

Pedestrian Safety

- Notice
- Mission, Goal, O...
- Pedestrian Safety
- Guidelines
- Crosswalks
- Pedestrian Safety
- Right of Way
- Right of Way
- Enforcement
- Enforcement
- Enforcement
- Service Requests
- Review
- Review
- Key Points
- Resources
- End

"Pedestrian Safety"

Presented by

The Education and Training Division
and
The Chicago Department of Transportation

2013


Pedestrian Safety
Notice
Mission, Goal, O...
Pedestrian Safety
Guidelines
Crosswalks
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Notice
Many courses require the Adobe Flash Player and Java to play correctly. If older versions of Flash or Java are installed on your workstation, then some elements in this course may not work properly. If you are unable to download new software due to access rights on a Department computer, then please note the property tag number on the desktop and call "4-DATA."
This course has some audio elements. Turn your speakers on.

Pedestrian Safety

Find the entire report and read more about pedestrian safety in Chicago here: Pedestrians.

Guidelines

When responding to the scene of a pedestrian crash, immediately secure the scene and summon emergency equipment, if needed. When completing the Illinois Traffic Crash Report, the striking vehicle is "Unit 1" unless the preliminary investigation reveals that the striking vehicle is not "at fault." Otherwise, the "at fault" vehicle is "Unit 1." For reporting purposes, the "at fault" vehicle does NOT necessarily have to strike another vehicle or a pedestrian.

When completing the Illinois Traffic Crash Report, do not use the letter "X" or any other marks to fill in the input boxes. If any information is not applicable, then leave the box blank. Use

Crosswalks

Crosswalks are defined as the extensions or prolongations of the sidewalk. Legal crosswalks may be marked or unmarked. Pedestrians have the same right-of-way on both types of crosswalks. **A pedestrian enters the crosswalk when one foot leaves the sidewalk.** Portions of the streets that do not extend from the sidewalks are NOT pedestrian crosswalks.

Click on the diagram:

Pedestrian Safety

High Crash Corridors in Chicago

Street	Boundary
79TH	M. L. King to Stony Island
Cicero	Harrison to Chicago
63RD	California to Ashland
Western	71ST to 63RD
95TH	Eggleston to M.L King
Fullerton	Central to Cicero
79TH	Ashland to Halsted
Madison	Central to Pulaski
North	Kostner to Kedzie
Chicago	Keeler to Kedzie
Devon	Sacramento to Leavitt
Broadway	Montrose to Balmoral

Source: "City of Chicago 2011 Pedestrian Crash Analysis"


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Enforcement

At **controlled crosswalks**, drivers may be in violation of multiple Municipal Code of Chicago (MCC) ordinances including but not limited to:

9-24-030 - Crosswalks - Pedestrians to have right-of-way
"Where stop signs are in place at a plainly marked crosswalk at an intersection or between intersections, pedestrians within or entering the crosswalk at either edge of the roadway shall have the right-of-way over vehicles stopped in obedience to such signs;"

9-8-020 - Traffic-control signal legend

Enforcement

Every vehicle is required to yield to pedestrians. If any vehicle overtakes another vehicle while there are pedestrians in the crosswalk, then the driver may be in violation of multiple Municipal Code of Chicago ordinances including but not limited to:

9-36-060 - Overtaking at Crosswalk.
"Whenever any vehicle is stopped at a marked crosswalk or at any unmarked crosswalk at an intersection to permit a pedestrian to cross the roadway, the driver of any other vehicle approaching from the rear shall not overtake or pass such stopped vehicle."


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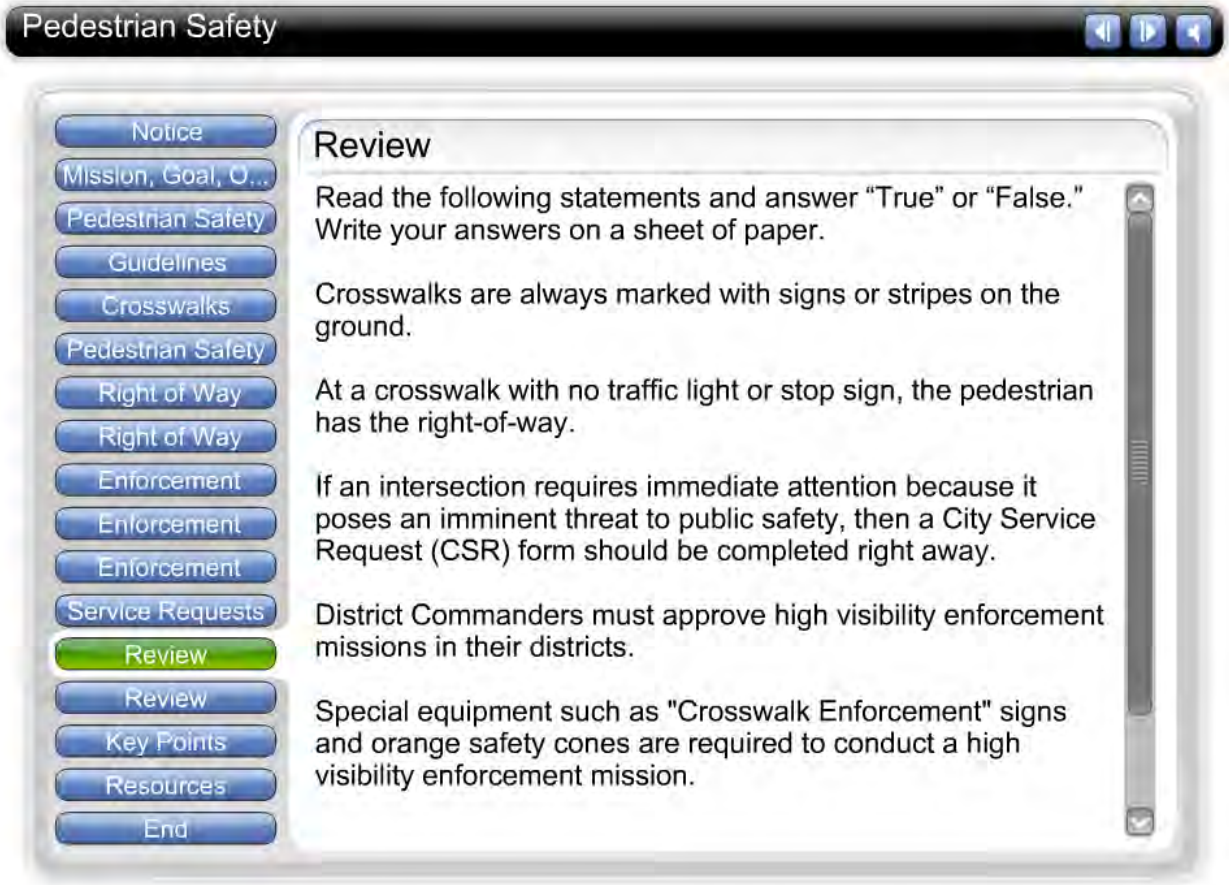
Service Requests

If situations such as cave-ins or non-functioning traffic signals pose public safety threats and require immediate attention, then inform the Office of Emergency Management and Communications (OEMC). However, if situations do NOT require immediate attention but the crosswalk could be made safe for pedestrians, then complete the City Service Request (CSR) form. The CSR can be initiated by police officers or citizens. Only one CSR will be completed for each service request except in the case of multiple abandoned vehicles, when a request form will be completed for each vehicle.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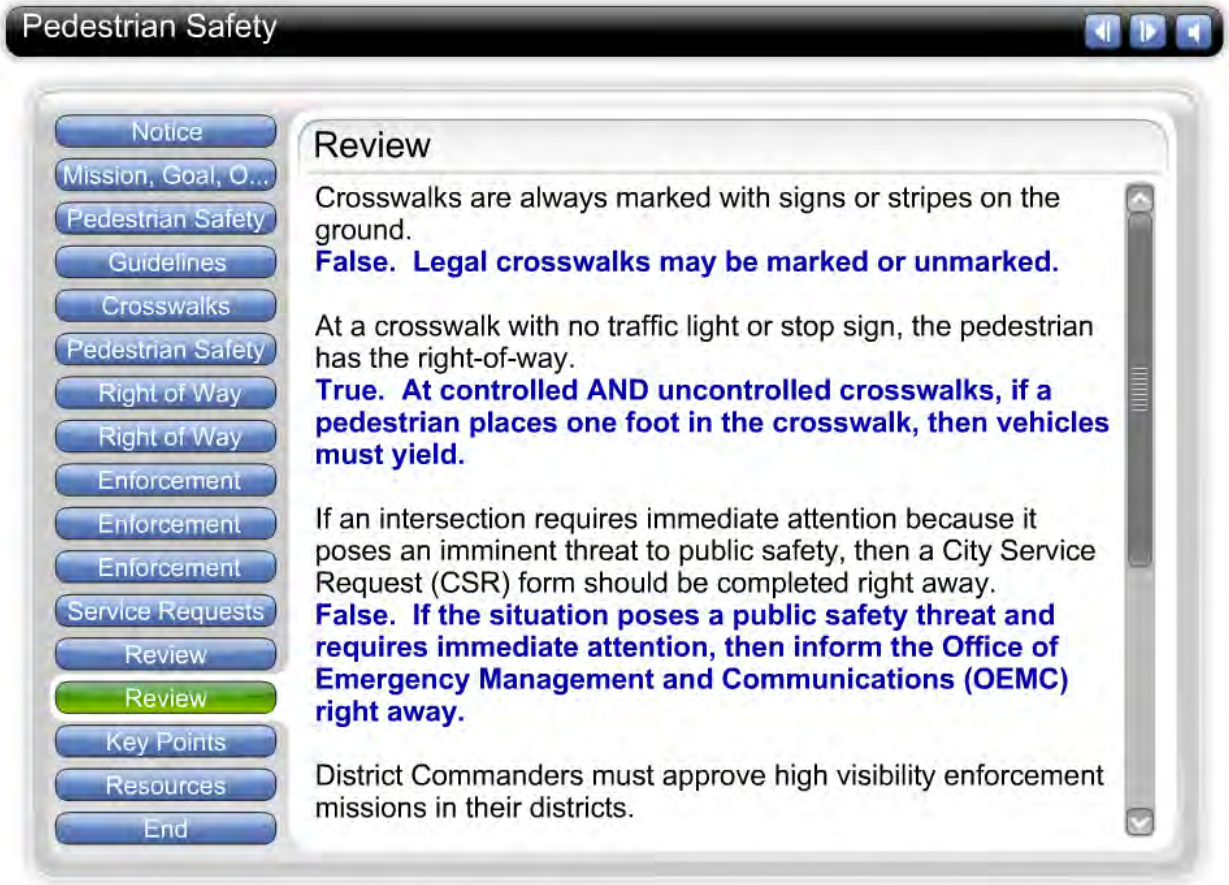
Review
Read the following statements and answer “True” or “False.” Write your answers on a sheet of paper.
Crosswalks are always marked with signs or stripes on the ground.
At a crosswalk with no traffic light or stop sign, the pedestrian has the right-of-way.
If an intersection requires immediate attention because it poses an imminent threat to public safety, then a City Service Request (CSR) form should be completed right away.
District Commanders must approve high visibility enforcement missions in their districts.
Special equipment such as "Crosswalk Enforcement" signs and orange safety cones are required to conduct a high visibility enforcement mission.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Crosswalks are always marked with signs or stripes on the ground.
False. Legal crosswalks may be marked or unmarked.
At a crosswalk with no traffic light or stop sign, the pedestrian has the right-of-way.
True. At controlled AND uncontrolled crosswalks, if a pedestrian places one foot in the crosswalk, then vehicles must yield.
If an intersection requires immediate attention because it poses an imminent threat to public safety, then a City Service Request (CSR) form should be completed right away.
False. If the situation poses a public safety threat and requires immediate attention, then inform the Office of Emergency Management and Communications (OEMC) right away.
District Commanders must approve high visibility enforcement missions in their districts.

Key Points

Crosswalks are the extensions or prolongations of the sidewalk.

Crosswalks may be marked or unmarked.

Crosswalks may be controlled or uncontrolled.

Speed enforcement and high visibility enforcement reduce the number of pedestrian crashes.

Drivers must yield to pedestrians in the crosswalk.

If a crosswalk requires immediate attention because it poses a public safety threat, then notify the Office of Emergency Management and Communications (OEMC) right away. Otherwise, submit a City Service Request (CSR) form.


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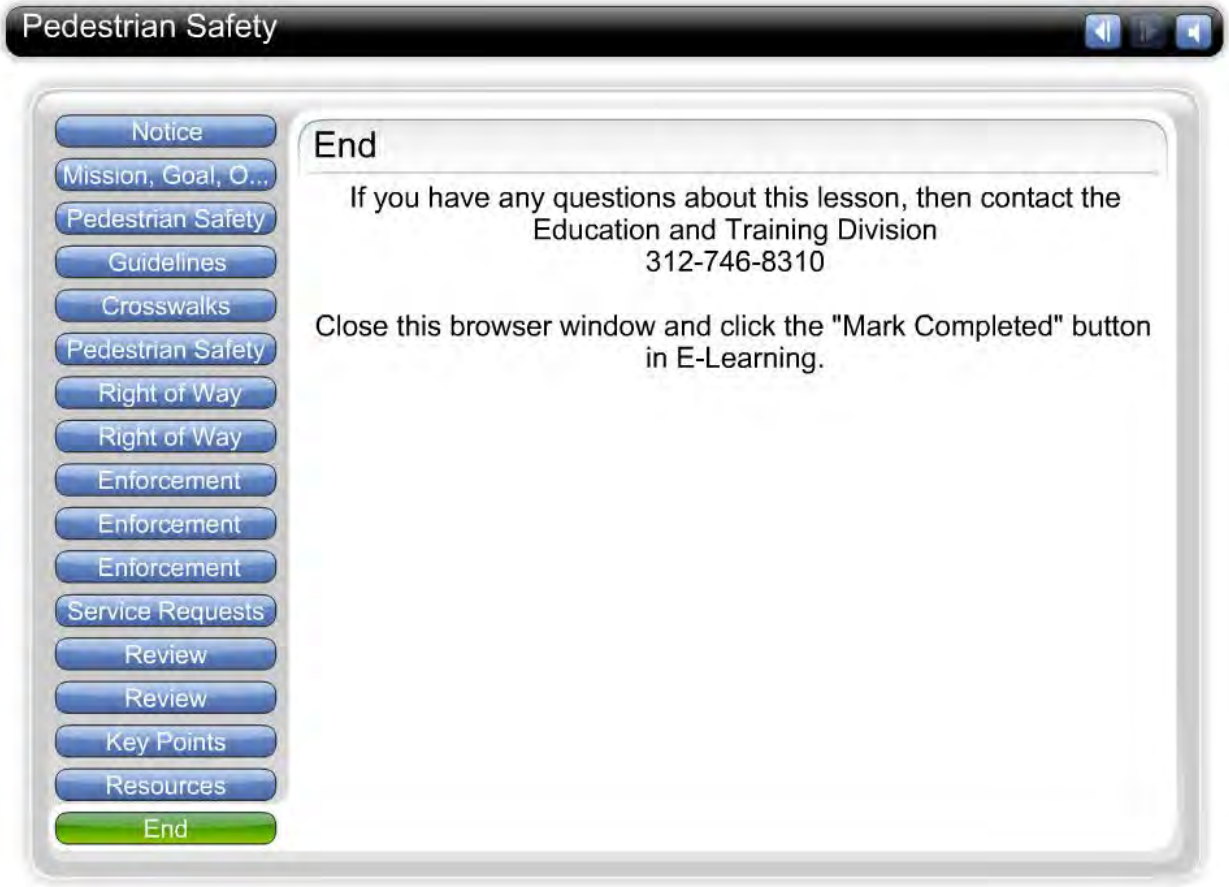
2011 Pedestrian Crash Analysis - Summary Report. 2011. Chicago Department of Transportation.
City Service Requests. 2009. Special Order S02-03-04. Chicago Police Department.
Crashes - Fatalities or Life Threatening Injury. 1998. General Order G04-07-02. Chicago Police Department.
Illinois Traffic Crash Report. 2012. Training Bulletin ETB12-04. Chicago Police Department.
Illinois Traffic Crash Report SR1050 Instruction Manual for Law Enforcement Agencies. 2009. Illinois Department of Transportation.
Pedestrian Safety. 2012. Training Bulletin ETB12-09. Chicago Police Department.
Preliminary Investigations - Required Immediate Notifications.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If you have any questions about this lesson, then contact the Education and Training Division
312-746-8310
Close this browser window and click the "Mark Completed" button in E-Learning.

Appendix J
Driver Yielding Behavior at Crosswalks in Chicago

The following report was prepared for the Chicago Department of Transportation to determine the effects that the crosswalk enforcement and media campaigns had on driver yielding behavior at crosswalks in Chicago. The study compared data on driver yielding behavior for two periods - before the campaigns and after.

Driver Yielding Behavior at Crosswalks in Chicago

Prepared By:
Dr. Ron Van Houten, Ph.D.
Western Michigan University

James Considine, AICP, PTP
T.Y. Lin International

Tim Gustafson, AICP
T.Y. Lin International

For:
The Chicago Department of Transportation

March 2013

Table of Contents

1 Introduction

As part of the CDOT Pedestrian Safety Awareness Campaign project, a before and after study of driver yielding behavior was conducted at a sample of signaled and unsignalized crosswalk locations in the city of Chicago. The purpose of this effort was to evaluate the impact that the marketing and enforcement campaign had on motorist yielding behavior and pedestrian crossing behavior. Data were collected for the baseline condition occurred between May 6, 2011 and June 17, 2011 at 8 signalized and 8 uncontrolled crosswalks. Data collected for the treatment condition (after the marketing and enforcement campaign) occurred between August 10, 2012 and October 23, 2012.

For this study, driver yielding and non yielding events were recorded for drivers performing the following actions in the presence of pedestrians in the crosswalk at signalized intersections:

- Drivers turning right at a green light.
- Drivers turning left at a green light.
- Drivers turning right on a red light.
- Drivers passing within half a lane of pedestrians.

The following was recorded at unsignalized intersections:

- Natural crossings - Driver yielding behavior to observed pedestrians attempting to cross within the crosswalk.
- Staged crossings - Driver yielding behavior to data collectors behaving as pedestrians attempting to cross within the crosswalk.
- The distance from the crosswalk that motorists yielded in advance of a pedestrian in the crosswalk.
- The number of pedestrians trapped by vehicles passing in front of and behind pedestrians in the crosswalk.
- The number of conflicts between drivers and pedestrians in the crosswalk. A conflict is defined as a near crash event or an evasive action taken either by the driver or the pedestrian.

2 Data Collection Methods

Crosswalks at Signalized Intersections

Eight signalized intersections were selected to record driver yielding behavior in the presence of crossing pedestrians. The number of drivers yielding and not yielding to pedestrians, driver-pedestrian conflicts, and pedestrians trapped in the crosswalk by drivers were recorded as measures of driver behavior. Data were recorded for 20 pedestrian crossing events at each location when vehicles were present.

Driver yielding behavior was recorded only when pedestrians were in the crosswalk when the WALK sign was illuminated, the FLASHING DON'T WALK symbol was illuminated, or when a pedestrian countdown clock was in operation. Driver yielding behavior was recorded when a pedestrian indicated an intention to cross the street. An attempt to cross was defined as a pedestrian facing oncoming traffic while placing one foot in the roadway in the crosswalk and the other foot on the curb. When a pedestrian began crossing, yielding behavior for drivers in the first half of the roadway was recorded. After the pedestrian reached the center of the roadway, the yielding behavior of drivers turning in the second half of the roadway was recorded. Data were recorded in this manner to be consistent with traffic laws regarding driver yielding requirements for pedestrians in crosswalks in Illinois.

A conflict between a motorist and a pedestrian was scored whenever a motorist had to suddenly stop or swerve to avoid striking a pedestrian or a pedestrian had to jump, run or suddenly step or lunge backward to avoid being struck by a vehicle. A driver was also scored for passing within half a lane of a pedestrian. The observers noted whether the driver passed in front of the pedestrian or behind the pedestrian.

Crosswalks at Unsignalized Intersections

Eight unsignalized intersections were selected to record driver yielding behavior in the presence of crossing pedestrians. Data collectors were trained on crossing protocol which involved placing one foot in the crosswalk before a vehicle entered the dilemma zone in order to record yielding or non yielding behavior. The dilemma zone was calculated using the following formula, which is the same formula that is used to determine the length of the yellow phase of a traffic signal:

$$y = \frac{t + v}{2a + 2Gg}$$

Where,
y = length of yellow interval calculated to the nearest 0.1 second
t = perception or reaction time of the driver, usually set at 1.0 second
v = the approaching vehicle's velocity in feet/second
a = deceleration rate usually set at 10 feet/second
G = acceleration attributed to gravity which is set at 32 feet/second
g = the grade of approach in percentage format divided by 100 (Institute of Transportation Engineers, 1985)

This formula calculates the time that is required for a vehicle to stop. The length of the dilemma zone is calculated by multiplying the time (y) from the above formula by the posted speed limit of the road. This provides a distance from the crosswalk where an approaching driver should able to safely stop when a pedestrian initiates the crossing. Yielding behavior was only recorded if the pedestrian initiated the crossing before the driver entered the dilemma zone. The dilemma zone was measured from the crosswalk

using a measuring wheel and marked with orange construction flags placed in the grass parkway adjacent to the road to indicate the boundary of the dilemma zone to data collectors.

Data collectors were trained to record driver yielding behavior when 1) The pedestrian had a single foot in the crosswalk 2) prior to the approaching driver entering the dilemma zone. A yielding driver was defined as a driver who stopped for the pedestrian or slowed the vehicle enough to allow the pedestrian to cross. The vehicles in the lane closest to the pedestrian were the focus of recording this information, although yielding behavior by drivers in the far lane was scored if the driver in this lane also was outside the dilemma zone prior to the pedestrian setting foot in the crosswalk. The percent of yielding drivers was calculated by dividing the total number of yielding drivers by the sum of yielding and non yielding drivers.

Additionally, data collectors recorded driver yielding behavior by how far in advance of the crosswalk that the yield occurred. Distances were recorded as less than 10 feet, between 10 and 20 feet, between 20 and 30 feet, and beyond 30 feet. The distances were measured using a measuring wheel and marked with orange sprinkler flags. The data collectors were trained to record whether a yield had occurred, and if a yield did occur, to also record the distance at which the yield occurred. The distance was defined as the number of feet between the front of the car and the crosswalk when the pedestrian was in the center of the travel lane in which the driver was approaching.

Conflicts between drivers and pedestrians were recorded, as well. Conflicts included occurrences of pedestrians trapped in the center of the roadway for more than 10 seconds while attempting to cross, or evasive actions, which consisted of a driver observed braking suddenly or changing lanes to avoid striking a pedestrian, or when a pedestrian was observed running, jumping, stepping back suddenly to avoid being struck by the approaching driver.

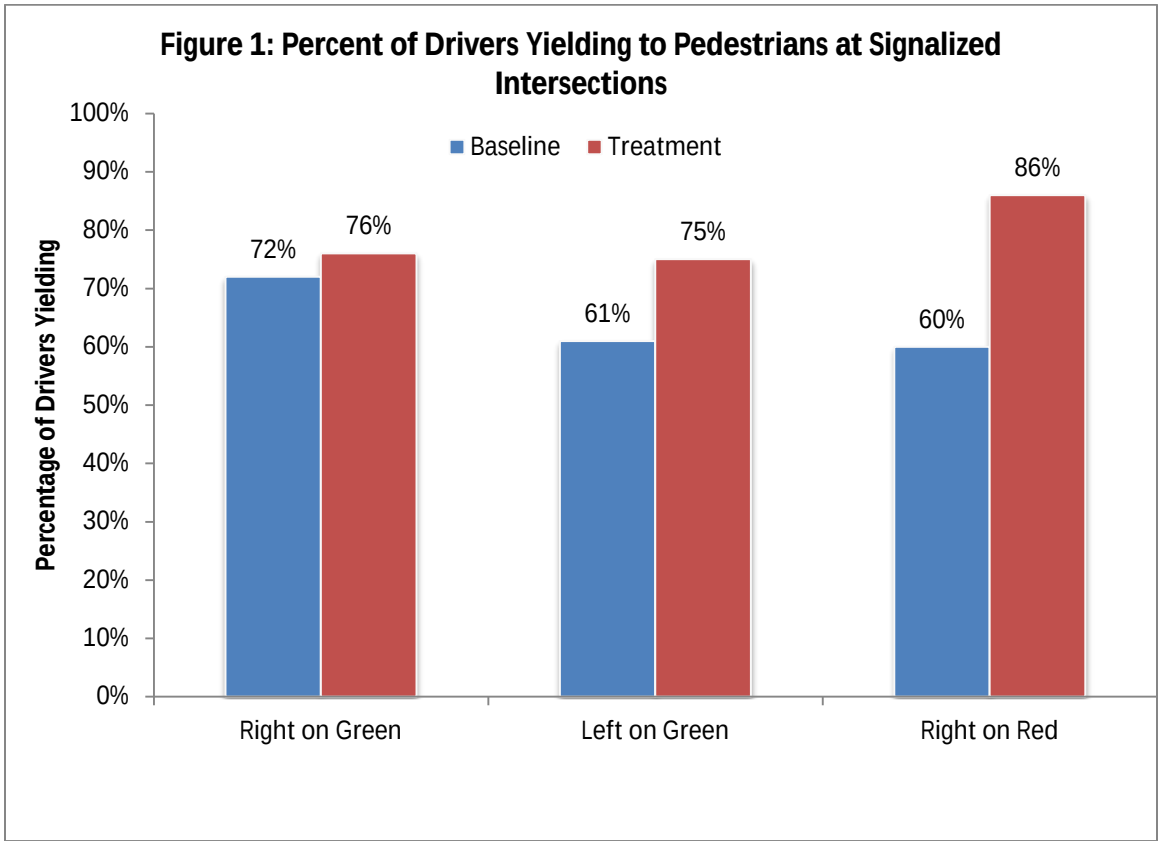
3 Data Results for Signalized Intersections

Driver Yielding Rates

Data collectors recorded 3,762 pedestrians crossing during 1,019 traffic cycles at 8 crosswalks for the before condition and 6,175 pedestrians crossing during 964 traffic cycles at the same 8 crosswalks during the treatment condition. The data show that a mean of 3.7 pedestrian were observed crossing per traffic signal during baseline condition and a mean of 6.4 pedestrians per traffic signal during the treatment condition. This difference was the due to an increased number of pedestrians at two of the sites. During baseline condition, the number of pedestrians crossing per cycle at Clark and Monroe increased from 4.8 to 14.5 pedestrians per cycle, and at Clark and Washington the number of pedestrian crossings increased from 4.8 to 14.5 per cycle. There were no major changes in the pedestrian volumes at any of the other sites.

Additionally, driver yielding actually decreased at these two sites following the marketing and enforcement campaign.

Figure 1 shows the yielding rates of drivers when turning right at a green light, turning left at a green light, and turning right on a red light. Drivers turning right facing green yielded 72% of the time, drivers turning left facing green yielded 61% of the time and drivers turning right-on-red yielded 60% of the time during baseline condition. After the marketing and enforcement campaign, yielding rates for drivers turning right at a green light facing green was 80%, turning left at a green light was 81%, and turning right on a red 86%. Driver yielding rates after the marketing and enforcement campaign was associated with a small increase in driver yielding at signalized intersections.



Data for individual intersections in **Table 1** show that six intersections showed an increase in driver yielding while two intersections show a decrease in driver yielding. The intersections that showed a decrease in motor yielding were observed to have a large number of pedestrians relative to the other intersections which, as a share of total pedestrian crossing events, reduced the mean yield rates for drivers turning right on green and left on green lights. Right turn on red is possible at these two intersections due to one-way streets, which resulted in a greater increase in yielding behavior for drivers turning right on a red light based on a smaller sample size. If these two intersections are omitted from the mean for the treatment condition, the change in

driver yielding behavior increases from a mean of 72% to 80% for drivers turning right on green, and from 56% to 81% for drivers turning left on green.

Table 1: Percent of Drivers Yielding to Pedestrians at Signalized Intersections by Driver Action

Intersection	Driver Action					
	Right on Green		Left on Green		Right on Red	
	Baseline	Treatment	Baseline	Treatment	Baseline	Treatment
43rd Street & Cottage Grove Avenue	72%	80%	50%	86%	50%	92%
47th Street & Cottage Grove Avenue	58%	76%	42%	90%	0%	58%
Ohio Street & Fairbanks Court	67%	88%	60%	70%	89%	100%
Clark Street & Monroe Street	72%	66%	69%	59%	NA	NA
Clark Street & Washington Street	72%	66%	69%	59%	NA	NA
Dearborn Street & Division Street	83%	78%	71%	77%	100%	91%
Clark Street & Division Street	77%	78%	56%	83%	NA	92%

Note: Right-turn-on-red data is based on a limited sample size. Highlighted intersections show intersections with no right turn on red activity due to one-way streets. NA indicates that no crossings were recorded for particular driver action.

Drivers Passing Pedestrians

The percentage of drivers passing within half a lane in front of pedestrians when turning right on green was 2.6% during the baseline and 6.3% during treatment. The percentage of drivers passing within a half lane behind pedestrians was 5.6% during baseline and 6.6% during treatment. A little more than twice as many drivers passed behind a pedestrian (5.6%) than passed in front of the pedestrian (2.6%) during baseline. This increase again is related to the two intersections that showed a large increase in pedestrian volumes during the treatment measures. If these two intersections are removed from the mean calculations, the number of drivers passing within a half lane in front or behind pedestrians remains largely unchanged. The percentage of drivers turning in front of pedestrians increased from 2.0% to 2.5% while the percentage of drivers passing behind pedestrians declined from 3.0% to 2.6%.

4 Data Results for Unsignalized Intersections and Midblock Crossings

Driver Yielding Rates

Data were collected at 793 staged crossings and 230 natural pedestrian crossings during baseline and 860 staged crossings and 297 natural pedestrian crossings during treatment at 8 unsignalized intersections. **Table 2** shows yielding at each unsignalized intersection. These data show that driver yielding rates vary from site to site. Driver yielding varied from a low of 11% at the intersection of Francisco Avenue and Division Street to a high of 55% at the intersection of Wells Street and Institute Place.

Table 2: Percent of Drivers Yielding to Pedestrians at Unsignalized Intersections

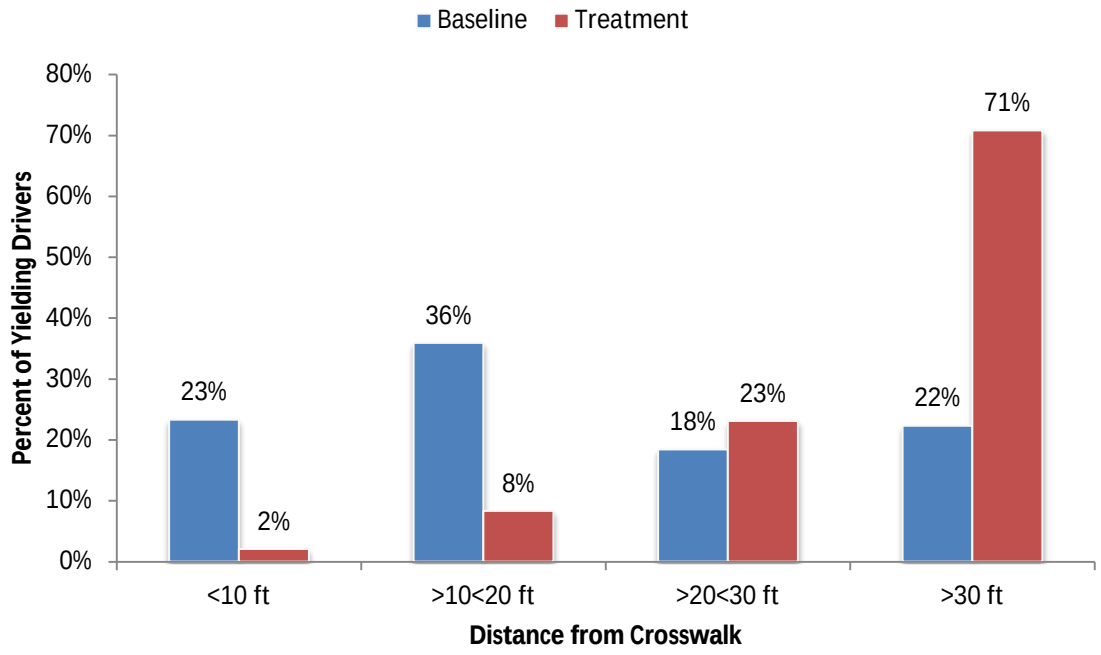
Intersection	Staged Crossings		Natural Crossings	
	Baseline	Treatment	Baseline	Treatment
Aberdeen Avenue & 79th Street	11%	20%	29%	9%
Augusta Boulevard & Mayfield Avenue	7%	8%	17%	6%
Central Avenue & Walton Place	8%	6%	19%	20%
Francisco Avenue & Division Street	10%	7%	11%	15%
Richmond Avenue & Division Street	25%	7%	39%	37%
Sangamon Avenue & 79th Street	10%	17%	13%	6%
Wells Street & Institute Place	29%	46%	55%	60%
Wells Street & Wendell Avenue	31%	70%	31%	67%
Mean	*16.4%*	*22.6%*	*26.8%*	*27.5%*

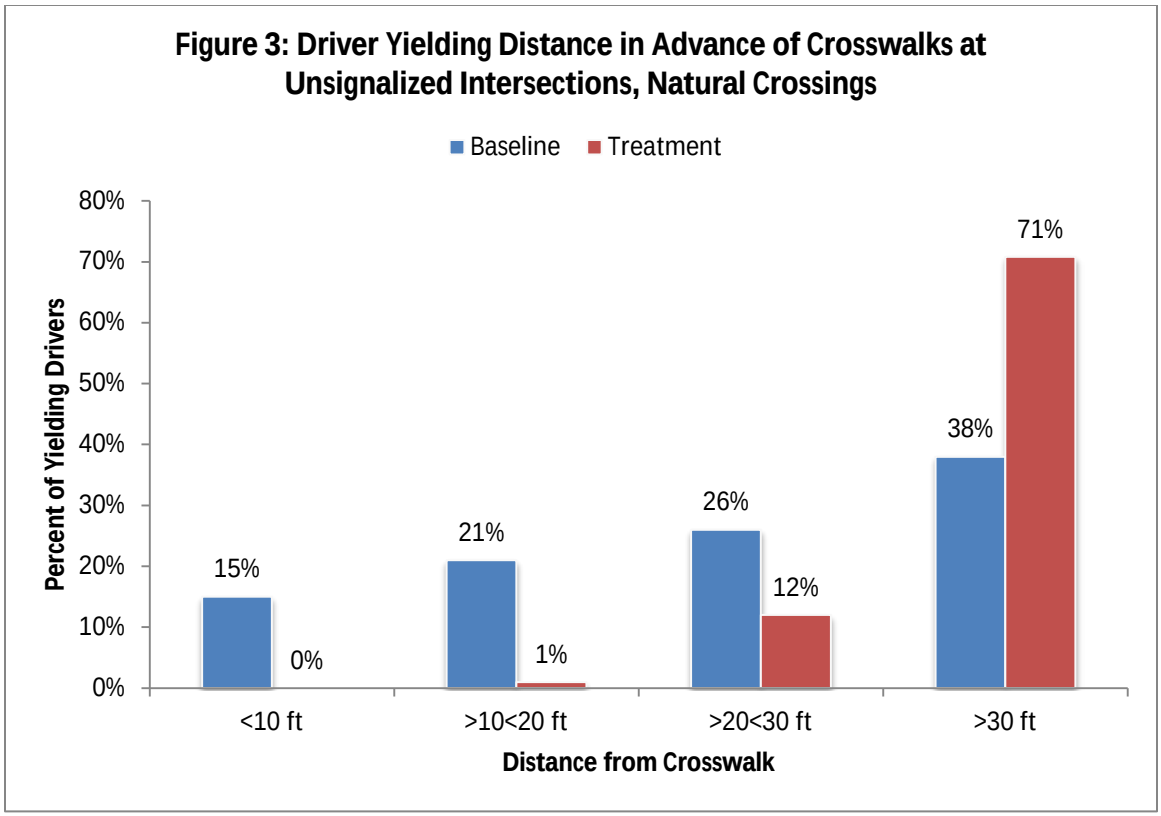
Although there was an Increase in yielding for staged and natural crossings at the intersection of Wells Street and Wendell Avenue and at the intersection of Wells Street and Institute Place, there was not much change in driver yielding behavior observed at the remaining six intersections. As is the case with other studies, driver yielding in this study is somewhat higher for natural crossings than for staged crossings. This may be due to a hypothesis that data collectors, following the recommended crossing protocol, are more conservative in their attempts to cross than a typical pedestrian.

Yielding Distance Results

Figure 2 and **Figure 3** show the stopping distances at unsignalized intersections during the baseline and treatment conditions. The data show that drivers tended to yield closer to the crosswalk during natural pedestrian crossings than during staged pedestrian crossings. This may be due to a more assertive crossing behavior observed by natural pedestrians who were observed stepping into the crosswalk in advance of vehicles that were closer to the crosswalk than data collectors following the recommended crossing protocol.

Figure 2: Driver Yielding Distance in Advance of Crosswalks at Unsignalized Intersections, Staged Crossings





In the treatment conditions, drivers stopped much farther in advance of the crosswalk for staged crossings as well as natural crossings. The yielding distance is greater for staged pedestrians crossings with almost all vehicles yielding more than 30 feet in advance of the crosswalk.

Conflicts Between Drivers and Pedestrians

Figure 4 shows conflicts between drivers and pedestrians for stated and natural crossings. Conflicts are expressed as a percent of total crossings; no conflict constituted more than 4% of all crossings. Conflicts recorded included pedestrians trapped in the center of the road while crossing and evasive actions, which consisted of drivers braking suddenly or changing lanes to avoid striking a pedestrian, or when a pedestrian was observed running, jumping, stepping back suddenly to avoid being struck by the approaching driver.

The data show that pedestrians observed in natural crossings were trapped in the center of the road more often than pedestrians in staged crossings, and drivers and pedestrians took more evasive actions during natural crossings than during staged crossings. This may be due to the more conservative approach exhibited by data collectors using the recommended crossing protocol during the staged crossings than pedestrians observed during natural crossings. This suggests that providing education on safe crossing techniques may help to reduce conflicts between drivers and pedestrians in crosswalks at unsignalized intersections. The technique followed in

research assistants making staged crossings is the same method used by police officers during crosswalk enforcement activities.

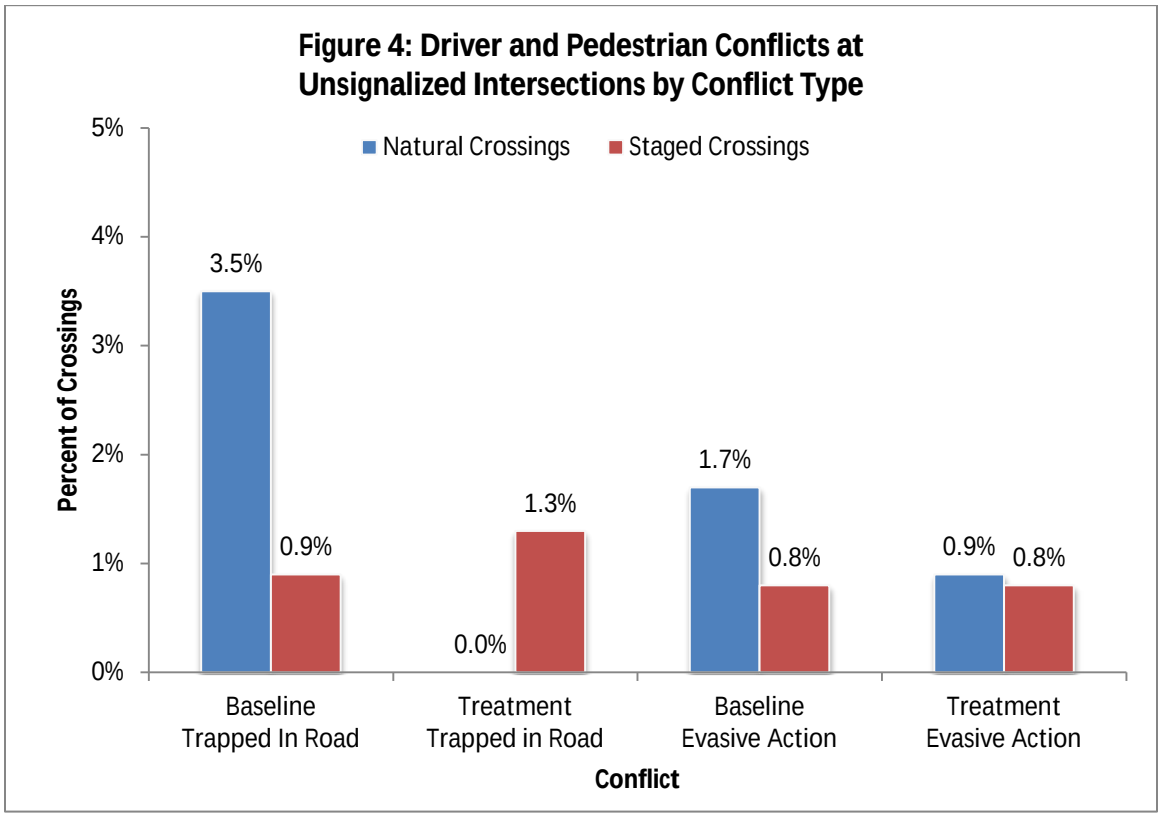


Figure 4 shows that there was a reduction in pedestrians in the road and evasive actions taken by drivers and pedestrians in natural crossings. Conflicts for staged crossing remained low constant during the baseline and the treatment condition. Again, this may have been due to comparatively conservative crossing behavior during the staged crossings.

Driver's yielded to pedestrians 26% of the time natural crossings and 16% of the time for staged crossings. The higher level of yielding for naturally occurring pedestrians is consistent with other studies and is likely the result of the more assertive manner in which natural pedestrians cross.

Figure 5 shows the distance that drivers yielded in advance of the crosswalk for staged and natural pedestrian crossings. These data show that drivers tended to stop closer to the crosswalk for natural pedestrians than staged pedestrians. This is consistent with other findings and is also likely the result of the more assertive crossing technique used by natural pedestrians.

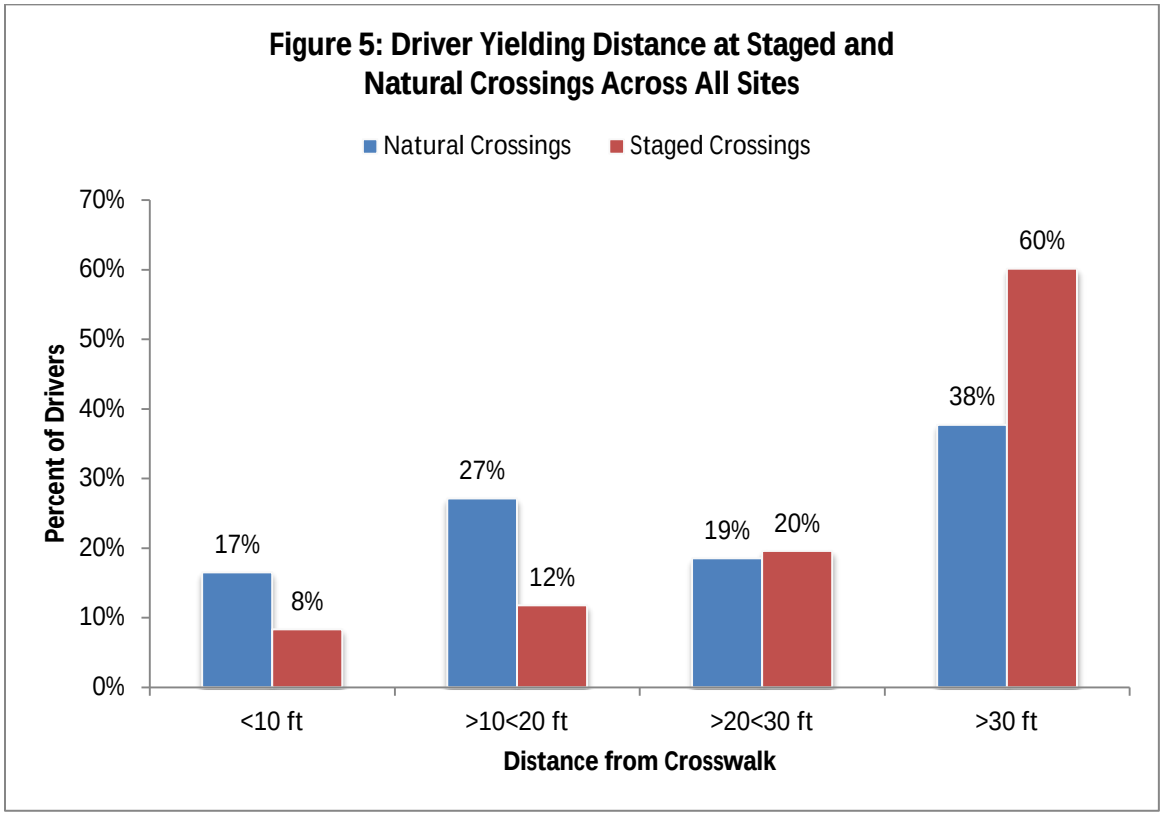


Figure 6 shows the percentage of conflicts for all staged and natural crossings at unsignalized intersections. The data show that natural crossings involve more conflicts than staged crossings. The reason for this difference is likely the result of the more conservative approach taken by data collectors trained on proper crossing protocol for staged crossings than pedestrians crossing naturally.

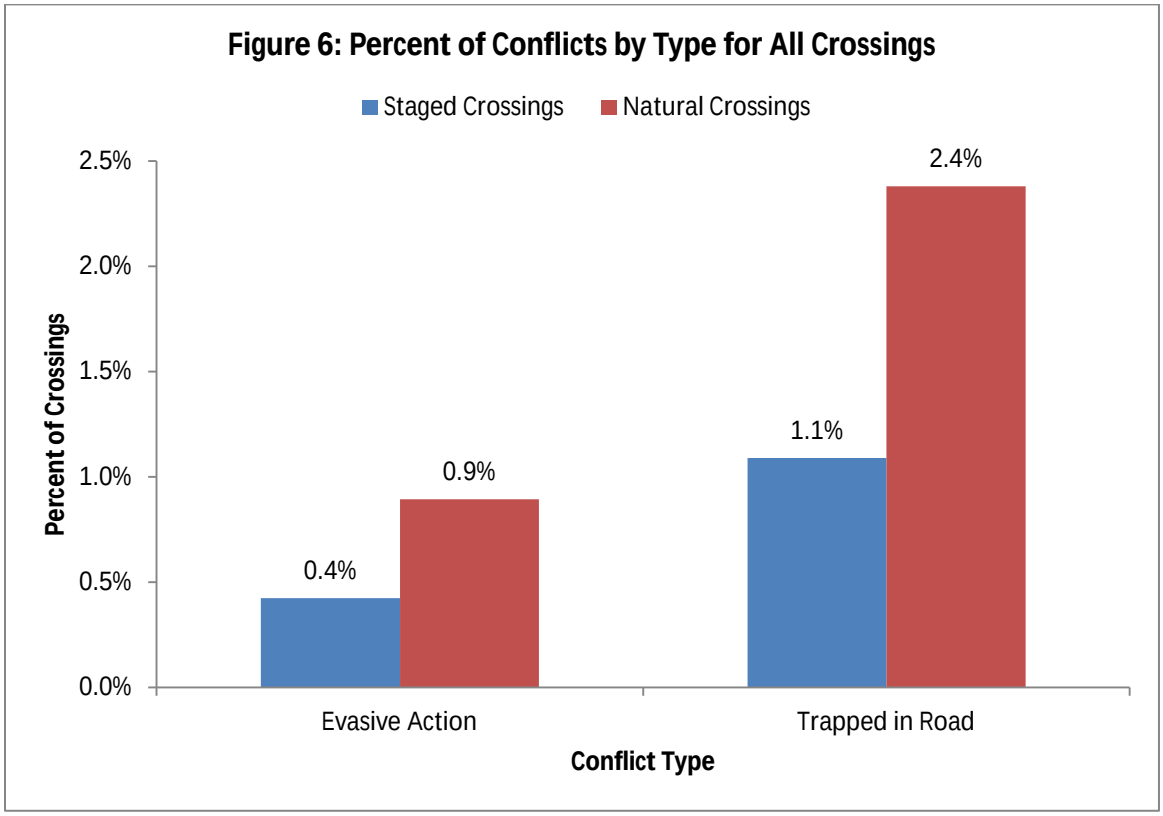
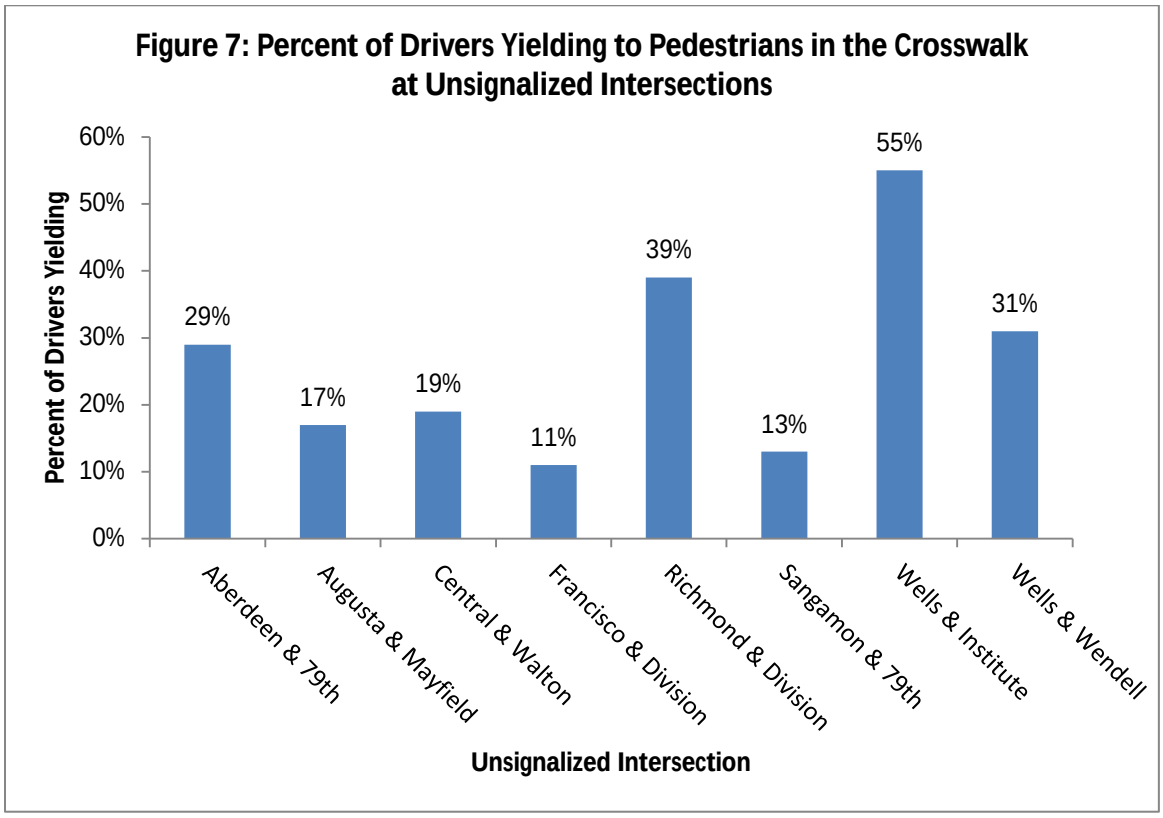


Figure 7 shows yielding at each of the 8 uncontrolled crosswalk sites. These data show that driver yielding varied from site to site. Yielding varied from a low of 11% at Francisco Avenue and Division Street to a high of 55% at Wells Street and Institute Place.



5 Conclusions

The before and after study showed that more drivers yielded to pedestrians in the crosswalk at signalized and unsignalized intersections after the crosswalk enforcement campaign was conducted. Drivers at unsignalized intersections yielded to pedestrians at greater distances, and both drivers and pedestrians were involved in fewer conflicts after the crosswalk enforcement campaign than during the baseline condition.

While staged crossings did not produce higher yield rates than natural crossings, drivers yielded at greater distances to pedestrians at these crossings, and were involved in fewer conflicts than drivers and pedestrians at natural crossings. This suggests a relationship between pedestrian crossing behavior and on driver behavior. Additional study is needed to determine which behaviors as well as other variables contribute to this effect. However, this relationship suggests that education on recommended crossing behavior could have an impact on yielding behavior and driver-pedestrian conflict.

Appendix K
Transferability Model

The following report provides a model that other agencies may use to develop their own pedestrian safety awareness campaign. The report is a series of questions and responses that cover topics ranging from developing a team of stakeholders to identifying successful components of a campaign to clarify the message and improve the effectiveness of a campaign.

The National Highway Traffic Safety Administration (NHTSA) encourages lessons learned to be assembled into a transferable pedestrian safety model that can be used by other agencies and municipalities. This transferability model was developed as part of the City of Chicago Department of Transportation (CDOT) Pedestrian Safety Awareness Campaign (Campaign). The Campaign aimed at reducing the occurrence of behaviors that contribute to pedestrian crashes through an education and enforcement campaign. The model is presented as a series of questions that provides lessons learned and recommendations that can be used by other agencies and municipalities.

Organization Management

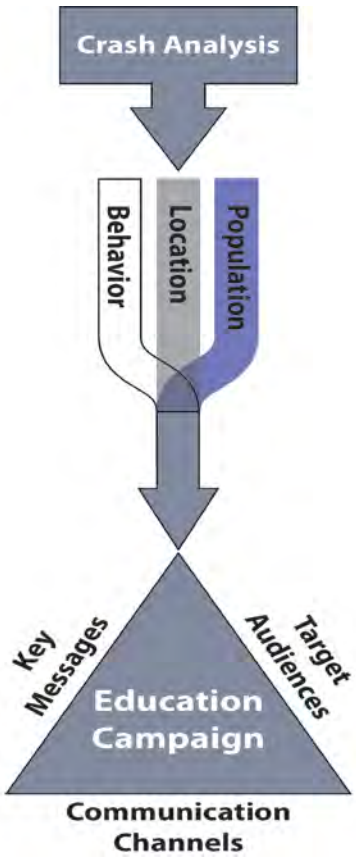
1. **Was management involvement important?**
   Yes, the CDOT Commissioner took an active role in providing direction in the marketing campaign. He took an active role in promoting the Campaign and provided direction on the marketing campaign. The Commissioner's involvement during the big media event helped to draw media attention.

2. **How did the Campaign relate to the overall pedestrian safety program?**
   CDOT has an ongoing pedestrian improvement effort that includes Safe Routes to School, Safe Walk Ambassadors, Safe Walk for Seniors, and other programs. In addition, the Chicago Pedestrian Plan was in the process of being prepared at the same time the Campaign was underway. CDOT also has a Complete Streets Policy and Complete Streets Design Guidelines that promote roadway designs that are safe and accessible for all users, regardless of transportation mode. This Campaign focused on education and enforcement. So, it was important that the Campaign be intertwined with other ongoing CDOT related initiatives.

3. **What was the goal of the Campaign?**
   The goal of the Campaign was to reduce the occurrence and severity of pedestrian crashes through an education and enforcement campaign that addressed populations most at risk, targeted areas where crashes are most likely to occur, and modified behaviors by pedestrians and motorists that are known to contribute to crashes.

   CDOT also has an ongoing engineering program to improve the pedestrian environment. While the focus of the campaign was on education and enforcement, the study provided information that supported engineering related efforts.

Crash Analysis



4. **How did the crash analysis influence the Campaign?**
   The crash analysis was the first step in the Campaign. It provided background data in which to develop the education and enforcement campaign. The analysis identified affected population, high crash locations, and behaviors contributing to pedestrian crashes.

5. **How important was the crash analysis for targeting locations for education, enforcement or engineering improvements?**
   It was essential for formulating the subsequent education and enforcement campaign. It provided credible data and information to the media and demonstrated that pedestrian safety was an important issue. The crash analysis also provided useful information for other CDOT pedestrian efforts including the Pedestrian Plan and targeting locations for traffic calming and pedestrian safety improvements.

Stakeholder Engagement

6. **How where stakeholders involved in the Campaign?**
   Feedback from stakeholders helped to determine what worked well and what efforts should be discontinued. Also, the stakeholders were potential communication channels for promoting the key messages of the campaign. Several presentations were made to the Mayor's Pedestrian Advisory Council. These presentation provided opportunities to get feedback and to promote the campaign messages.

   Normally, a campaign like this one might have involved more stakeholder engagement. However, the Pedestrian Plan was underway at the same time, and that effort provided stakeholder input into the overall pedestrian planning effort. In addition, the media campaign resulted in feedback through editorials, blogs and comments on articles. Generally, the City's efforts at improving

pedestrian safety were viewed in a very positive manner.

Marketing Campaign

7. What education efforts where most effective?

It was decided to communicate the key messages through the media. With a limited budget for marketing purposes, it was felt that getting the message out to the media provided the best means of reaching a wider audience. In addition, because everyone is a pedestrian, it was felt that the whole community was a potential target for the key messages. The big event, which involved the ghost mannequins and a press event drew extensive attention to the pedestrian safety awareness campaign. The media event recognized the significance of the education campaign and drew further attention to the campaign efforts.

8. How were the marketing images selected?

It was decided to develop graphic images that portrayed the horror of a pedestrian crash – not only for the pedestrian, but the driver as well. The key to the issue is that all people are pedestrian at some point and we are all affected by a pedestrian crash.

9. What materials are available for use by communities as a part of their own pedestrian safety campaign?

The CDOT Pedestrian Crash Technical Report and Summary Report are good resources to learn about conducting a large scale crash analysis. The marketing materials can be used or provide inspiration or a starting point for agencies wishing to undertake a pedestrian safety awareness campaign. The enforcement procedures and the enforcement training materials may be used by other police departments.

Police Enforcement

10. What techniques did the police department use to develop the enforcement campaign?

Police Departments, like all organizations, have to follow established rules and procedures. It was important for CDOT to communicate the mission of the pedestrian enforcement campaign to the Chicago Police Department (CPD) and then provide technical assistance that allowed them to develop their own general procedures for conducting the crosswalk enforcement. In other words, handing them specific and detailed procedures would not have worked. The CPD needed to develop their own procedures that reflected the availability of resources in order for the enforcement campaign to be effective.

11. What are the best locations to target police enforcement?

Locations were identified by CDOT in conjunction with CPD. The crash analysis provided an effective tool for determining the locations. However, locations also were identified through requests from aldermen or community organizations. The community input seemed to be a good way to identify locations as long deployment of the limited police resources was centralized and coordinated through CDOT.

Generally, marked crosswalks without traffic control devices along two lane roadways were the best locations for conducting enforcement campaign activities. Marked crosswalks were easier for the enforcement team to set up at, highly visible to drivers, involved a high level of non-compliance, and had areas were officers could pull vehicles over to issue citations.

With uncontrolled crosswalks, there remains high level of non-compliance with the laws in regards to pedestrians. The enforcement teams were very active at these types of locations.

Signalized crosswalks proved to be difficult for targeted enforcement activity. Logistically, set-up was difficult. High crash signalized intersections tended to have high volumes of traffic making it difficult for a squad car to pursue the offending driver. Also, due to the nature of the locations, the officers spent more time issuing citations for other offenses as opposed to those related to pedestrian safety. Finally, it was difficult for the enforcement activity to be visible. That is, it was difficult to set up a team so that drivers could clearly see that an enforcement campaign was under way.

12. How effective where the police enforcement efforts?

One measure of success was that the police officers were kept busy with issuing citations. With lack of enforcement activity, police officer morale suffered. Given the number of citations issued, the enforcement efforts were highly successful. Also, community interest in conducting the efforts was positive and contributed to the success of the campaign.

13. How was police department training conducted?

The Campaign included overall CPD training in regard to pedestrian safety regulations and the City's pedestrian safety program. Improving the knowledge of police officers was an objective that supported the City's overall goal of improving pedestrian safety. The training materials produced involved a training bulletin and a short on-line learning course.

The CPD has in-house resources for conducting training. The Campaign team worked directly with CPD in producing the training materials. The training materials were ultimately produced by CPD with technical assistance from the Campaign team.

The CPD training program provided a long-term strategy to improve pedestrian safety in the City. As more officers are trained and become aware of the pedestrian regulations and the City's effort to improve safety, there will be more emphasis on pedestrian safety enforcement.

Campaign Results and Outcomes

14. Did the Campaign improve pedestrian safety?

The crash analysis showed that improvements in pedestrian safety have been occurring over time. During the course of the Campaign, the before-and-after data showed some slight improvements in pedestrian and driver behavior, however, it was not significant. It appears that improving pedestrian safety will take a sustained continuous effort over a longer timeframe that includes ongoing education, enforcement and engineering improvements.

15. What are realistic pedestrian safety-related goals and objectives and should they be measured?

During the course of the Campaign and as part of the development of the Pedestrian Plan, a goal of eliminating all pedestrian crash deaths within 10 years and reducing injuries by 50% was developed. Measuring progress toward this goal will determine the success of the overall efforts. A means of collecting and reviewing data consistently over time will be needed.

16. What policies and programs are appropriate to improve the pedestrian environment?

The short lived campaign will have impacts beyond the immediate timeframe of the Campaign. The crash analysis provided a significant dataset in which to target awareness efforts. Media and public awareness was raised and will continue to contribute to a cultural change that promotes and encourages more walking. Over time, the Police Department will have greater awareness of the pedestrian safety regulations.

The Campaign was part of an overall pedestrian safety program within CDOT that will continue. CDOT plans to continue with using the marketing materials developed as part of the Campaign and continue with the enforcement activities at locations targeted through the crash analysis.

Appendix L
Stakeholder Involvement

The following materials include presentations that were prepared to communicate to agency stakeholders the objectives and activities undertaken by the Chicago Department of Transportation during the course of the Pedestrian Safety Awareness Campaign. Agency representatives from the Chicago Metropolitan Agency for Planning (CMAP) and attendees to the Association of Pedestrian and Bicycle Professionals (APBP) Pro Walk Pro Bike Conference in September 2012.

Contents

Chicago Department of Transportation Pedestrian Safety Awareness Campaign

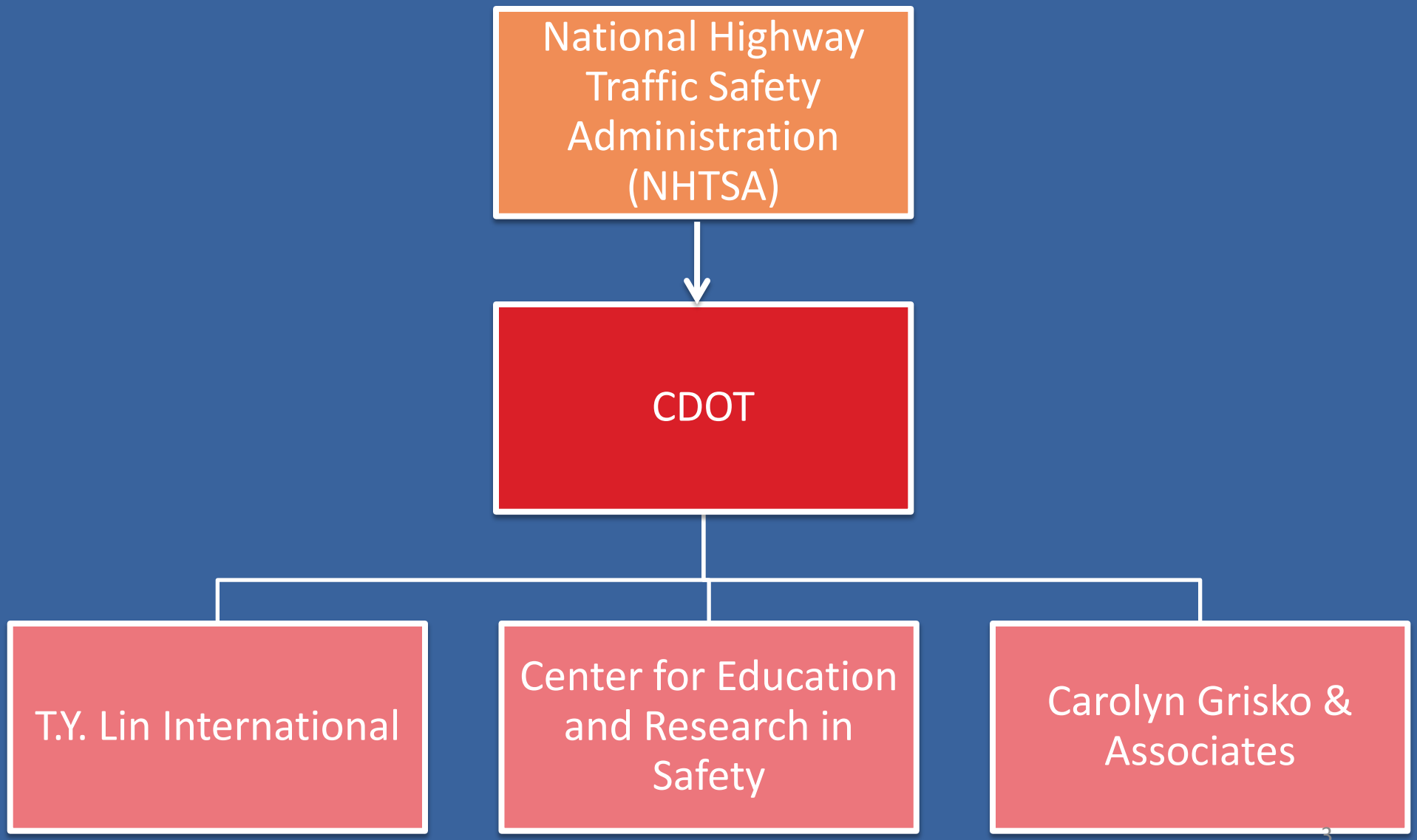
Presentation to the CMAP Bicycle and Pedestrian Task Force

April 20, 2011

Presentation

- Project Background
- Draft Pedestrian Crash Analysis Key Findings
- Next Steps

Project Team

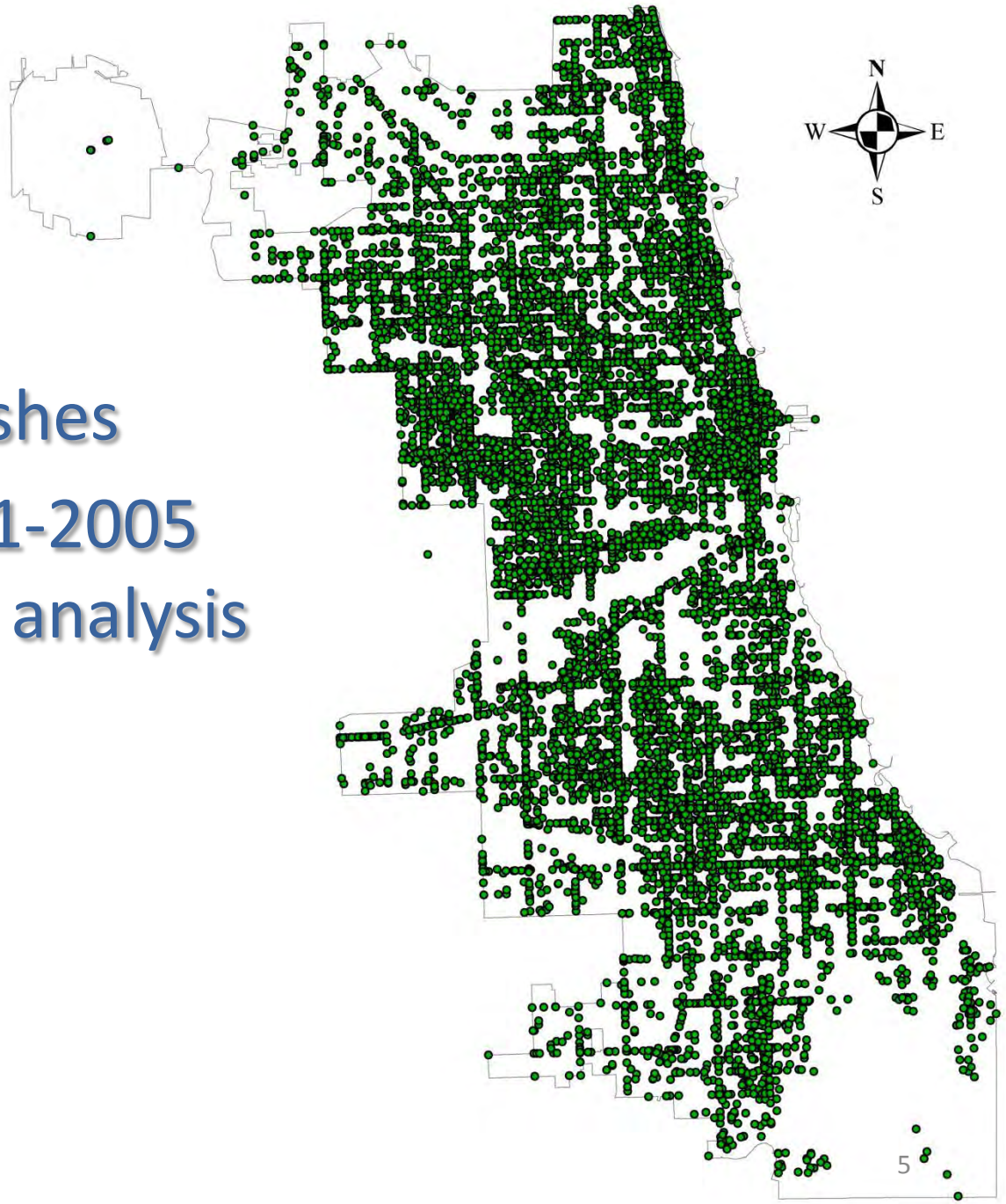


Project Steps

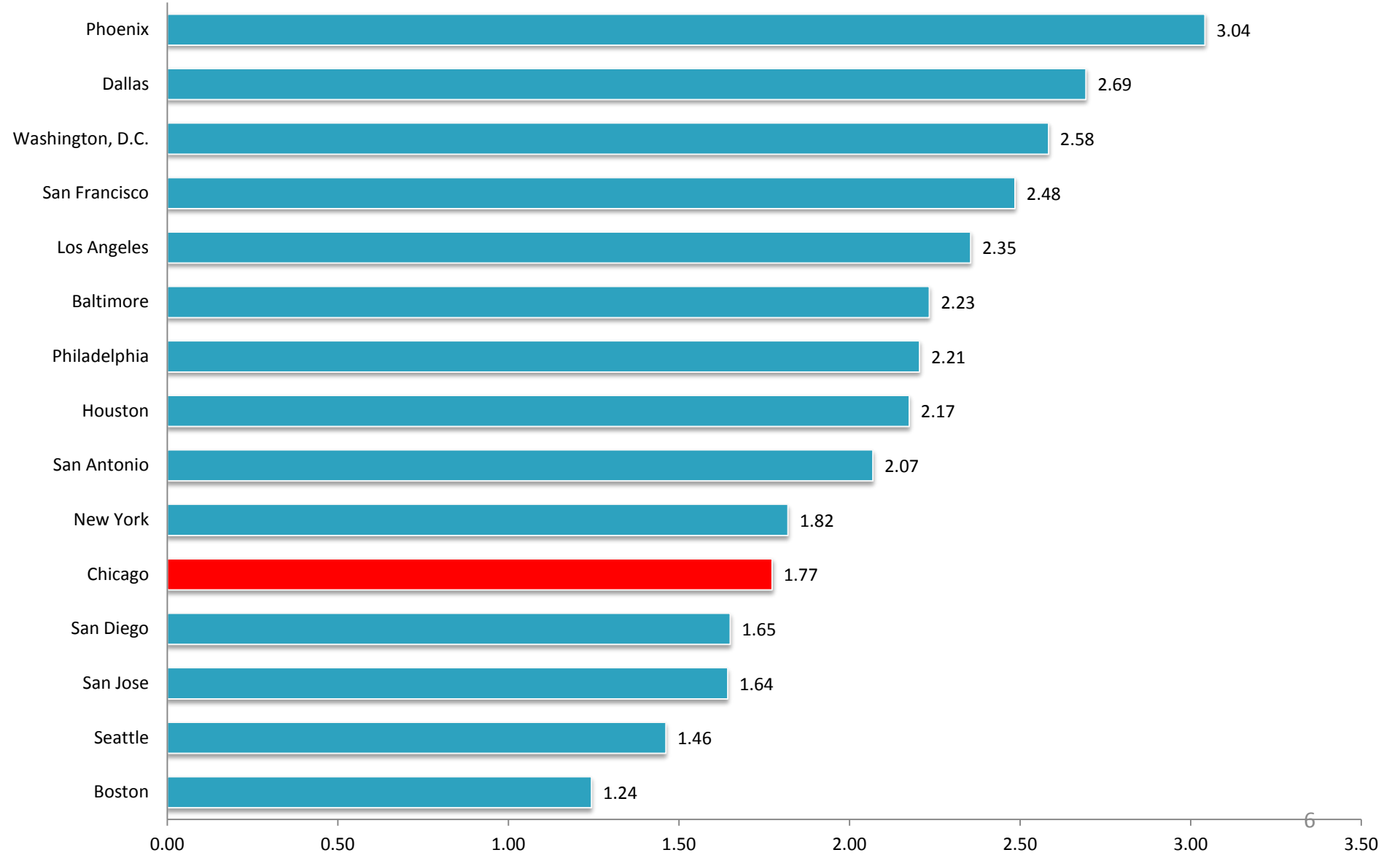
- Pedestrian Crash Analysis
- Develop Campaign Slogan and Key Messages
- Marketing and Media Outreach
- Enforcement – Site Specific
- Evaluation of Marketing and Enforcement

Pedestrian Crash Data Analysis

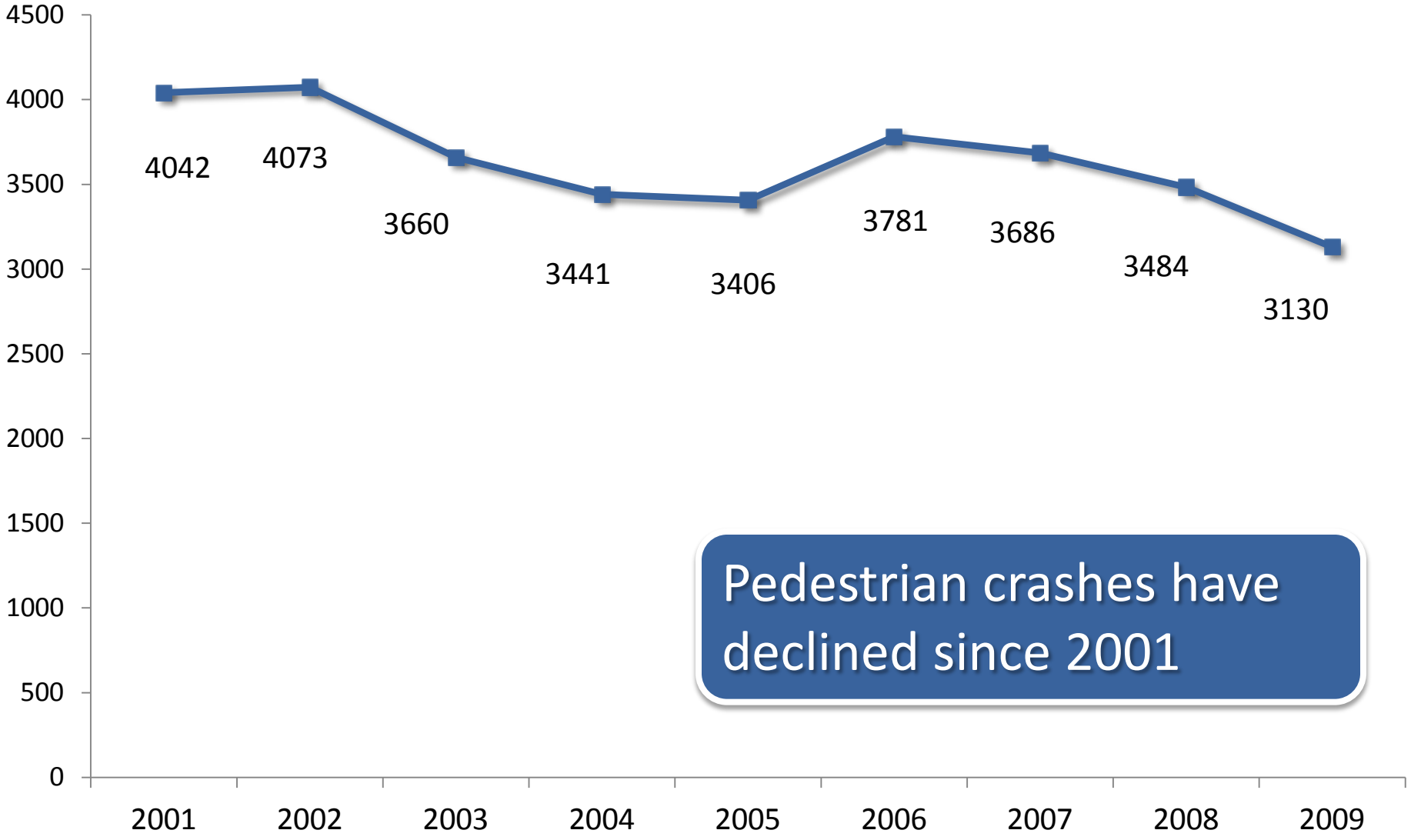
- 2005 – 2009 Crashes
- Builds off of 2001-2005 pedestrian crash analysis



Pedestrian Fatality Rates per 100,000 Population

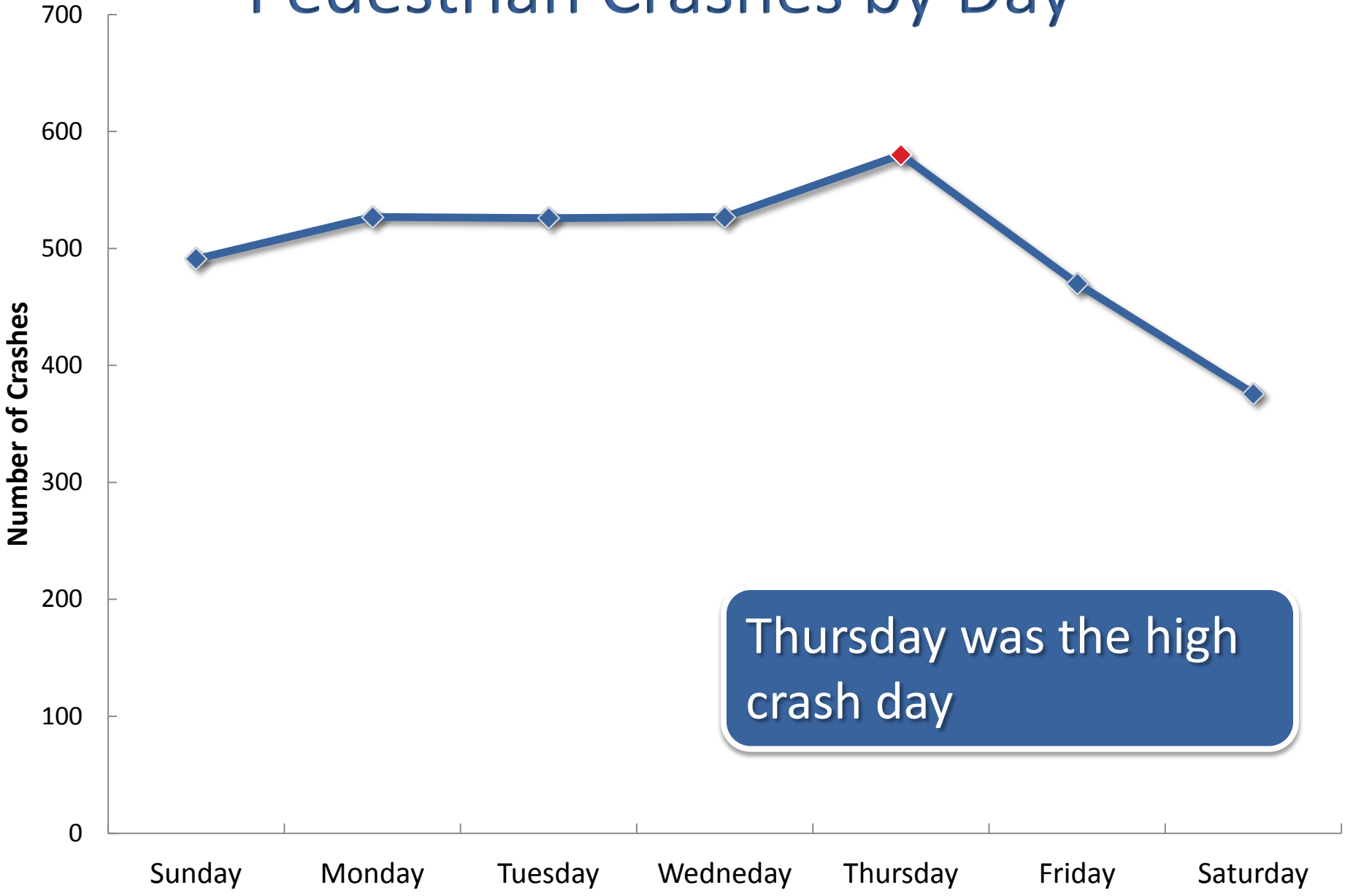


Pedestrian Crash Rates (2001 – 2009)

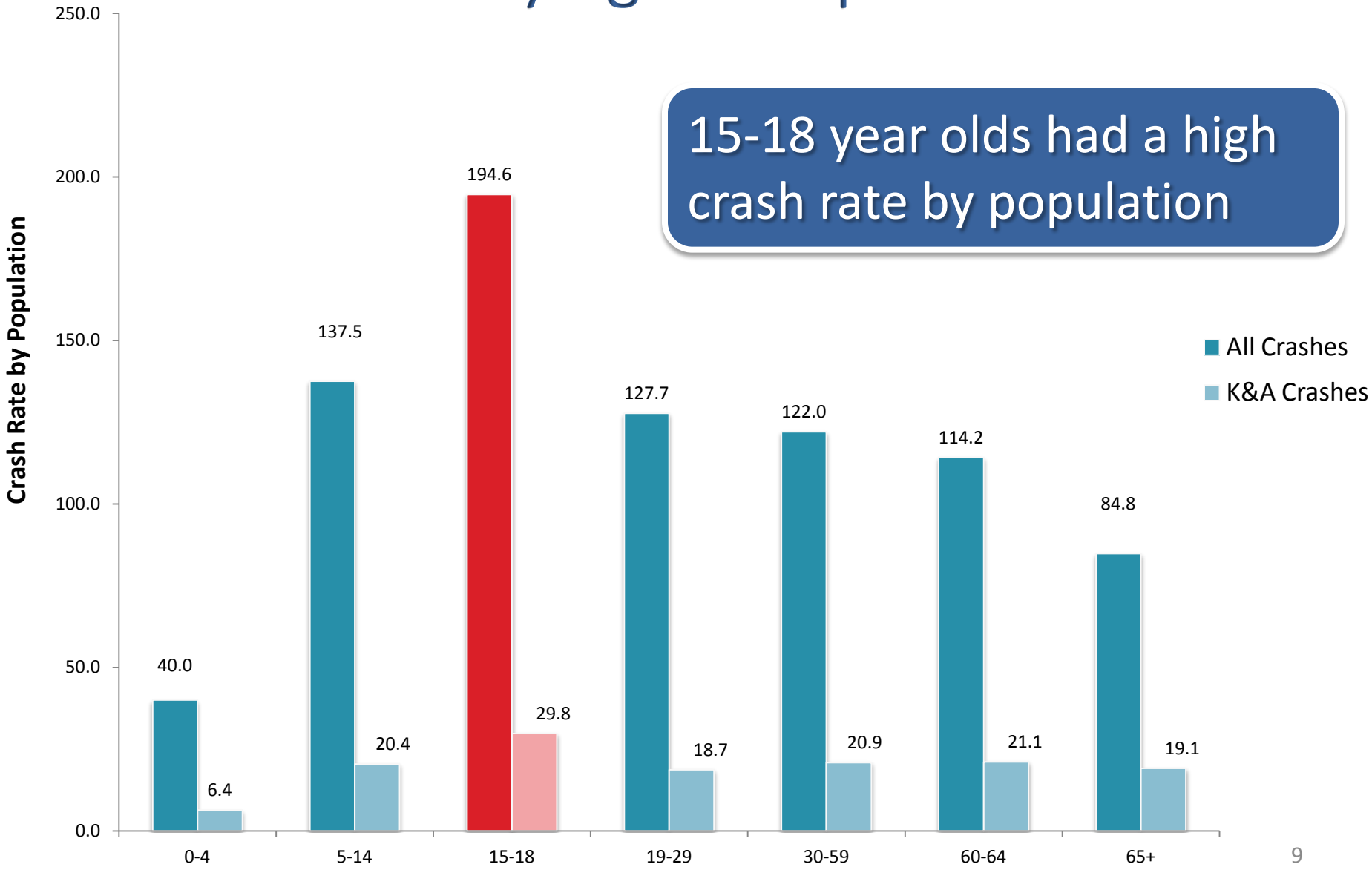


Pedestrian crashes have declined since 2001

Pedestrian Crashes by Day

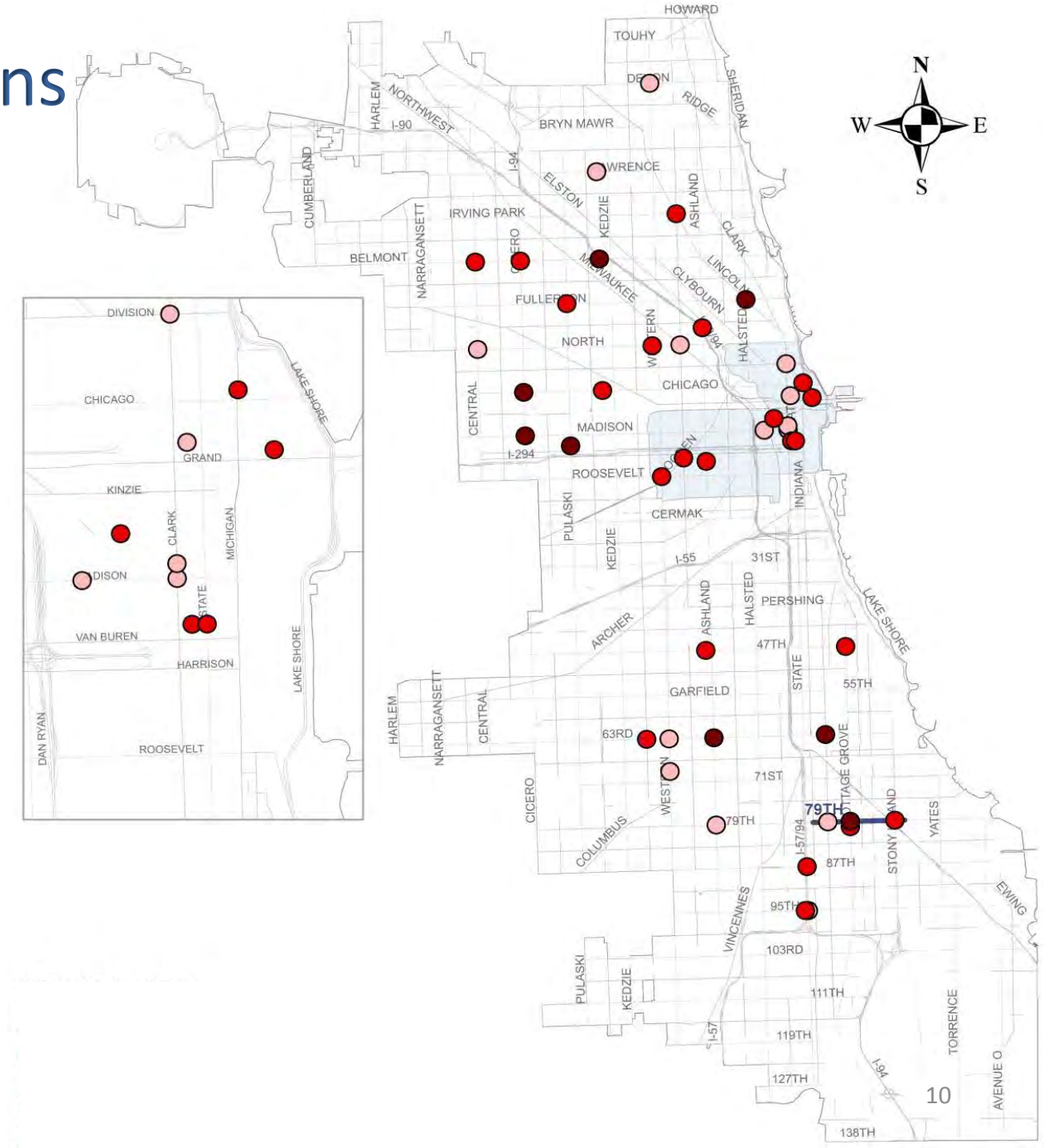


Pedestrian Crash Rates per 100,000 Population by Age Group



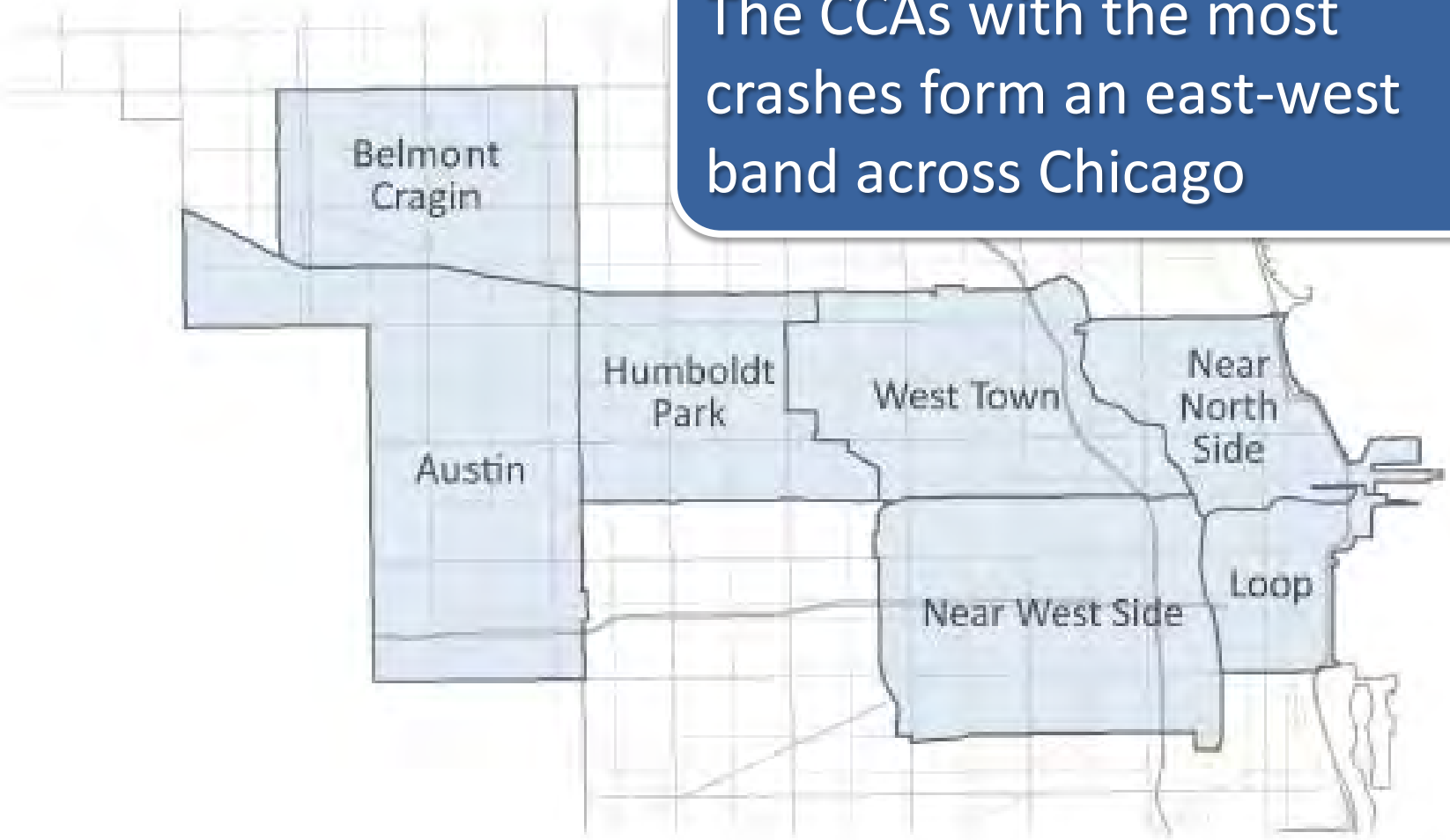
Top Intersections

Most of the crashes were intersection-related



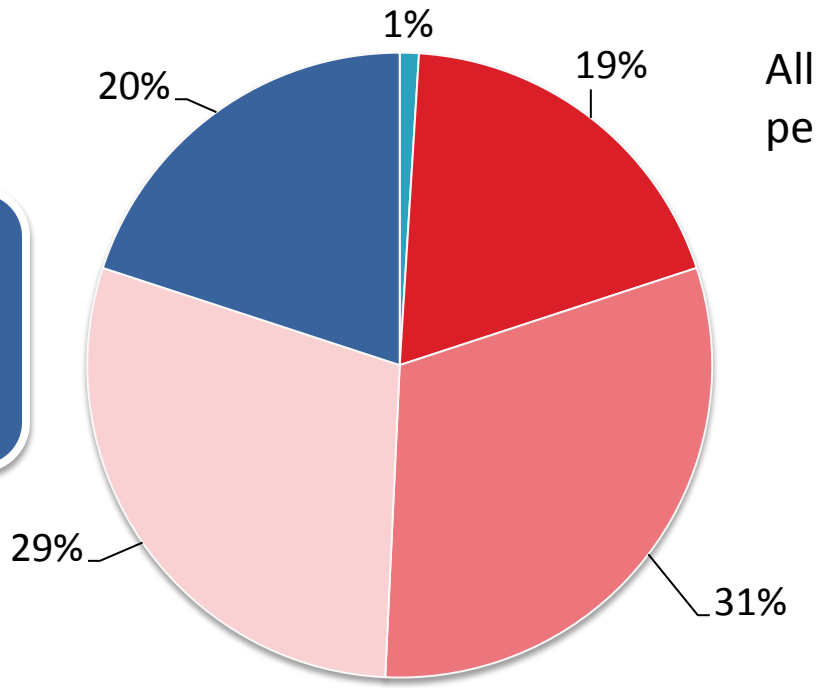
Chicago Community Areas

The CCAs with the most crashes form an east-west band across Chicago



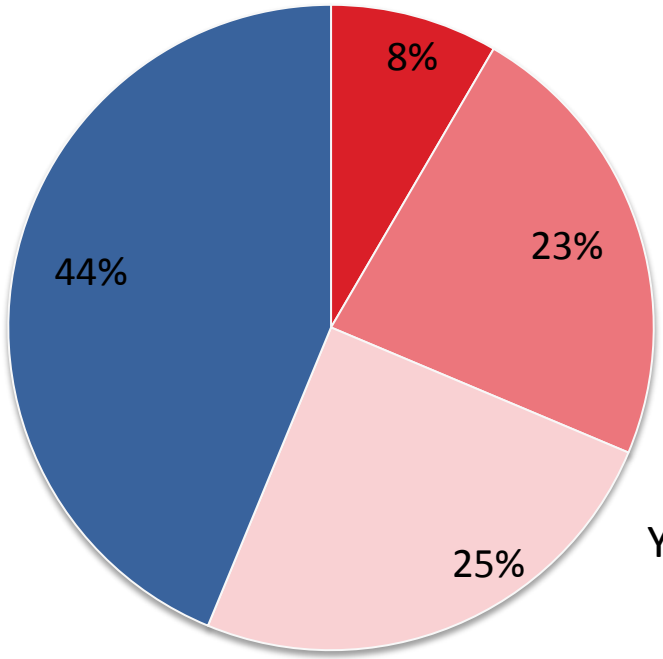
Roadway Type

The majority of pedestrians were struck on arterials and collectors



All pedestrians

Youth (0-14) were more likely to be struck on local roads than other age groups



Youth 0-14

Principal Arterial

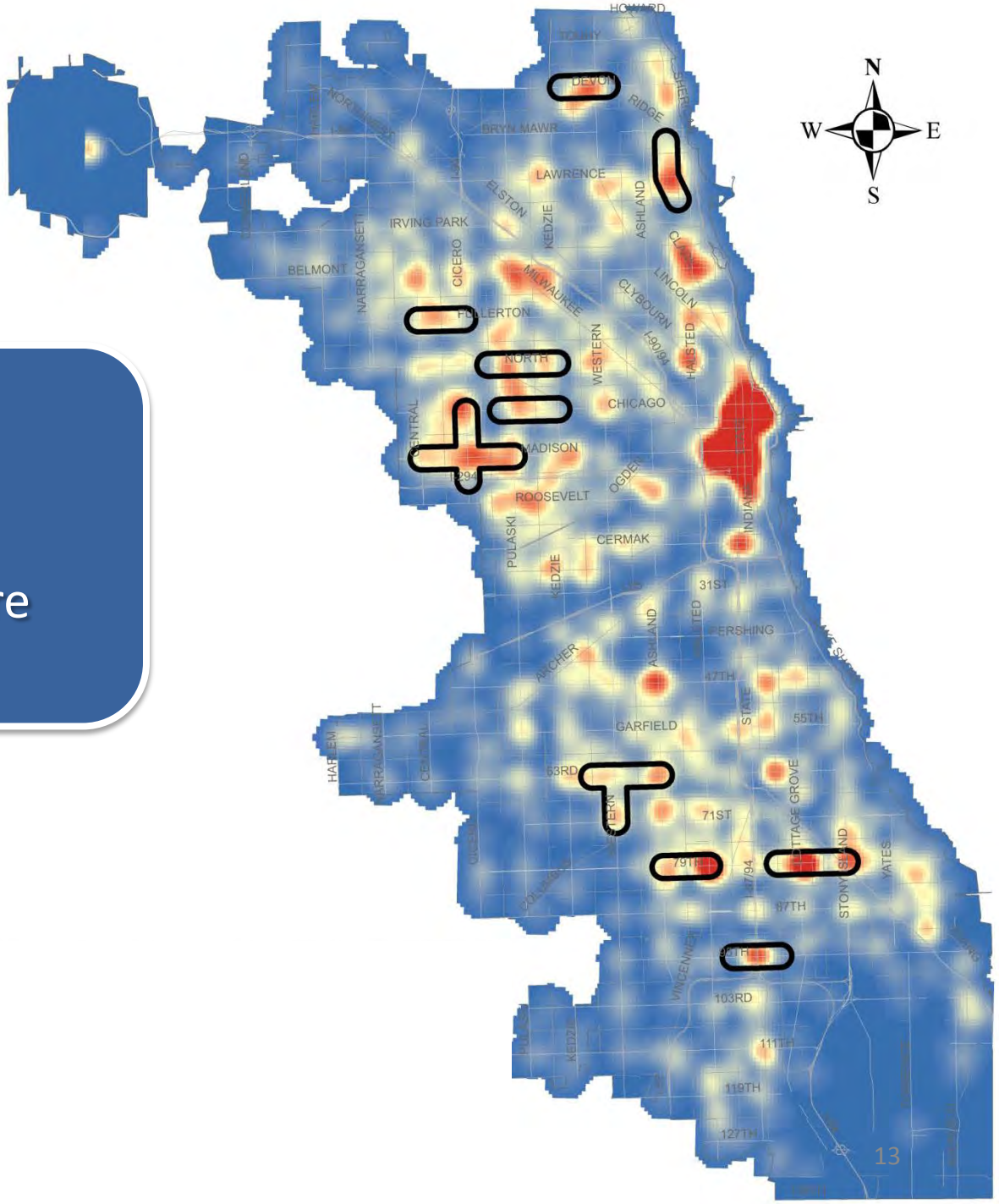
Minor Arterial

Collector

Local Street

High Crash Corridors

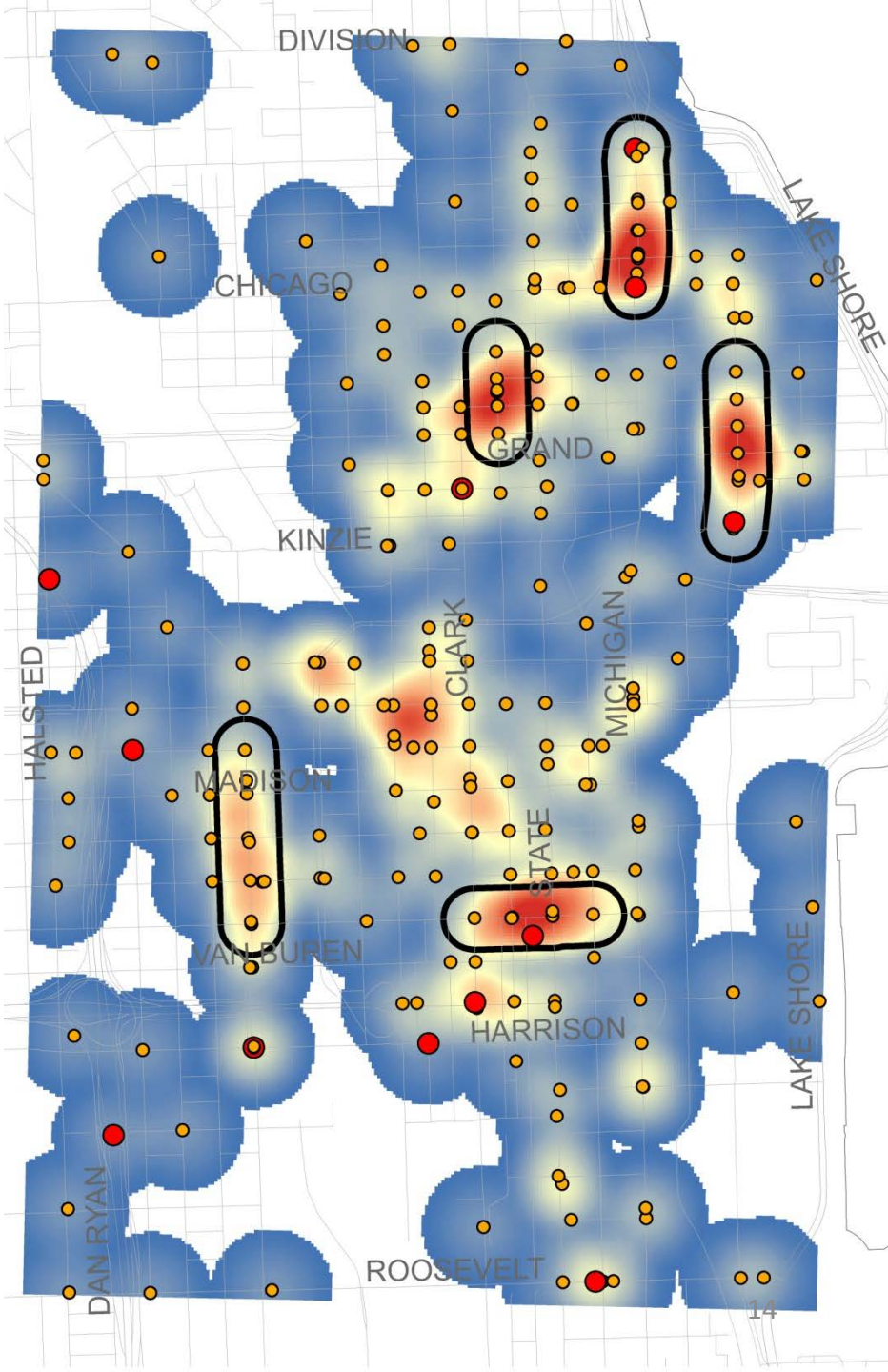
- All high crash corridors were arterials
- Eight out of twelve were four-lane roadways



CBD Crashes

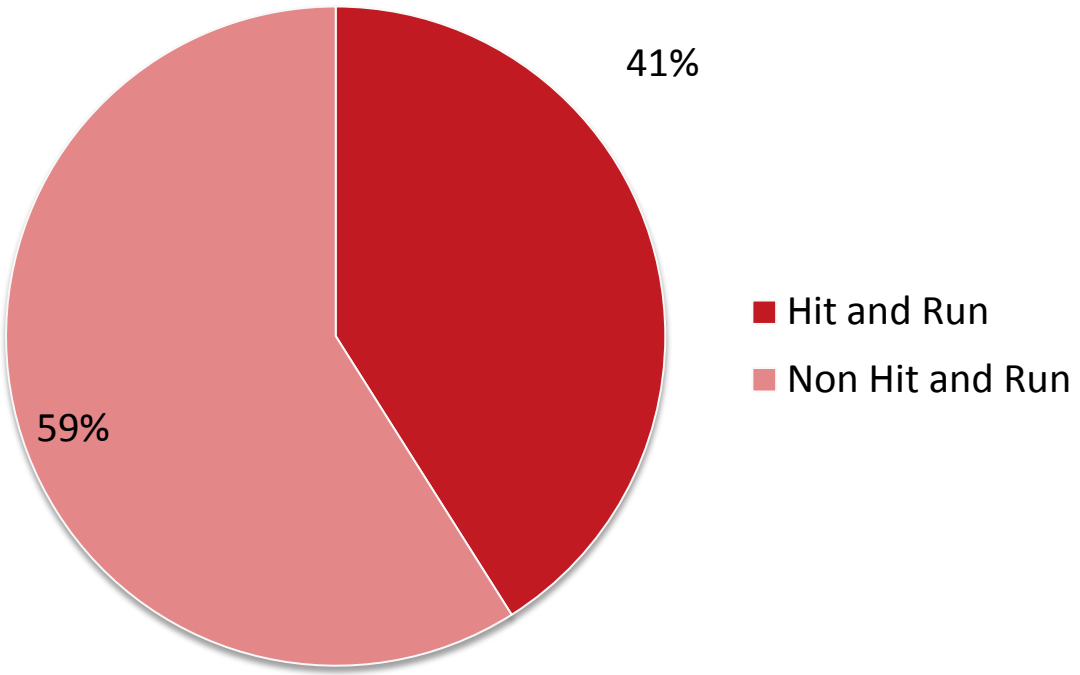
- Taxis were involved in 28% of pedestrian crashes in CBD, compared to 5% citywide

- Crashes in CBD involved more turning vehicles and than crashes outside CBD

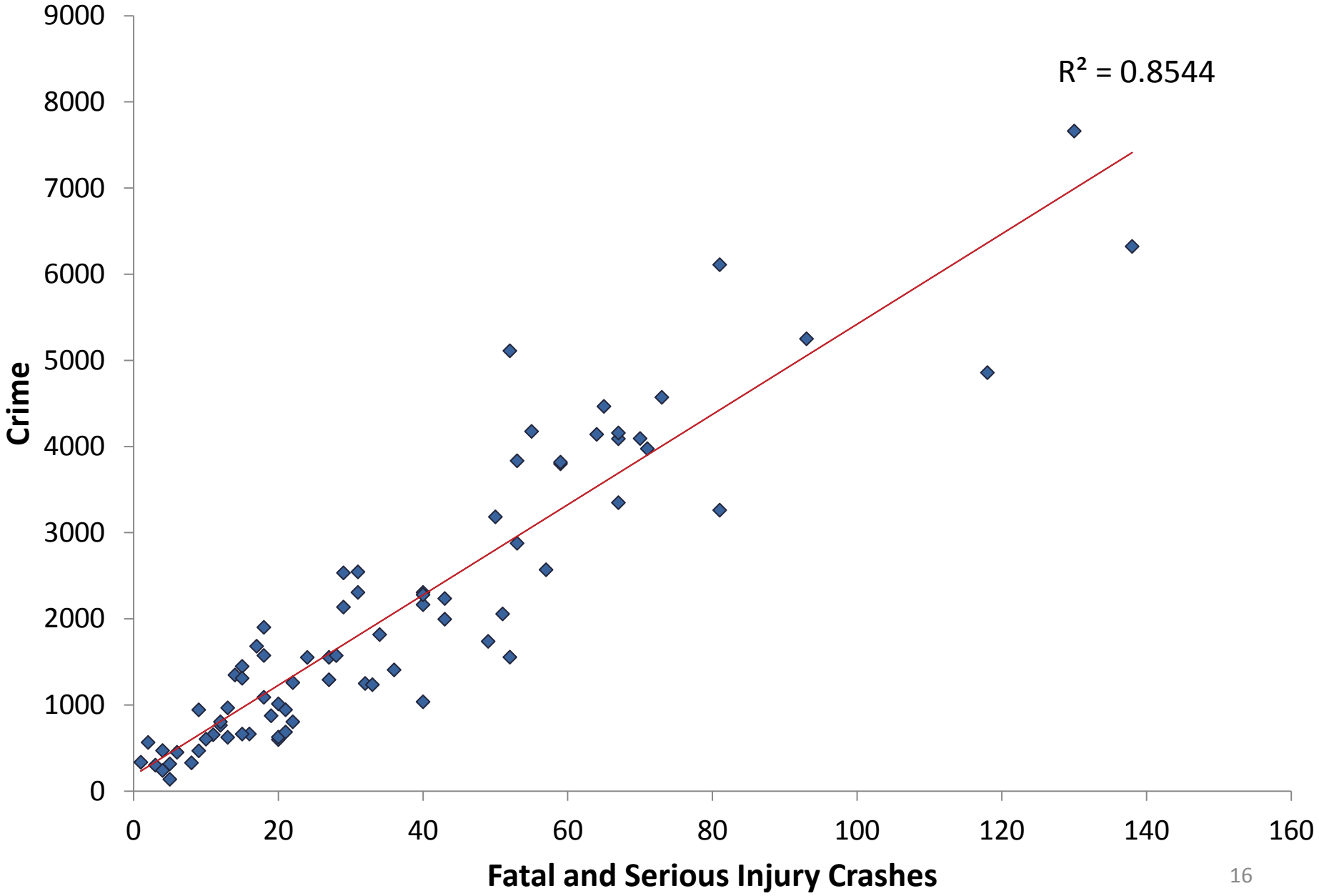


Hit and Run Crashes
Fatal Pedestrian Crashes

An average of 2 pedestrians per day were injured or killed in a hit and run crash each day

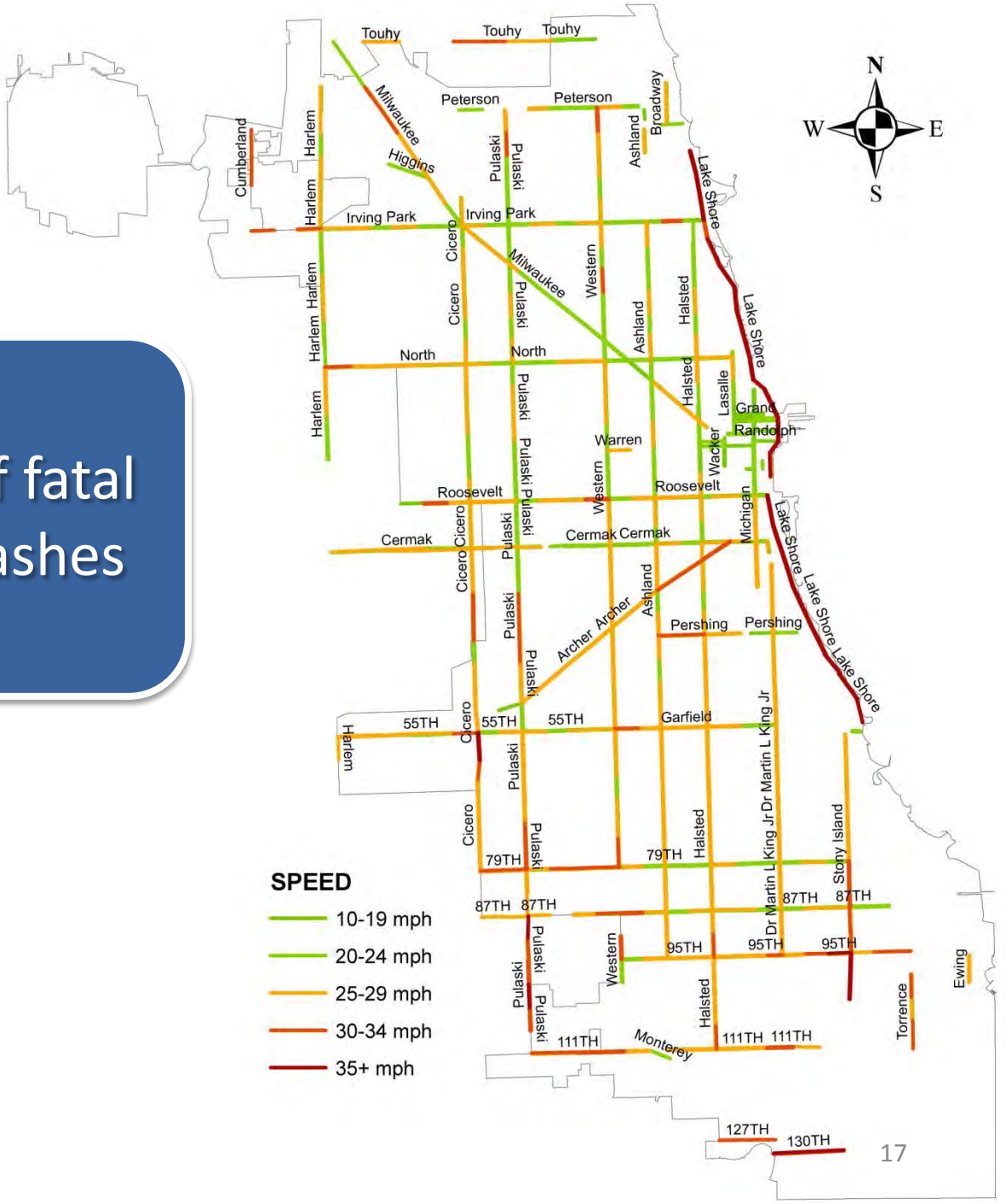


Pedestrian Crashes versus Crime



Speed

As average speed increased, the rate of fatal and serious injury crashes also increased



Next Steps

- Crash Analysis Reports
- Key Message Development
- Enforcement Campaign
- Marketing Campaign

Chicago Department of Transportation
T.Y. Lin International

Chicago Pedestrian Awareness Campaign

Pro Walk Pro Bike
Wednesday, September 12, 2012

Project Goals

- Crash Analysis
- Marketing
- Enforcement

Educational Strategy

Pedestrian Crash Analysis (2005-2009)

15-18 year olds have the **highest crash rate** per population

78% of all crashes occurred near an **intersection**

"Crossing with the signal" was the **most common** pedestrian action

52% of crashes at signalized intersections involved **turning vehicles**

It's Up to You. Be Alert. Be Safe

Attention Grabbing

What Does a Crash Look Like?

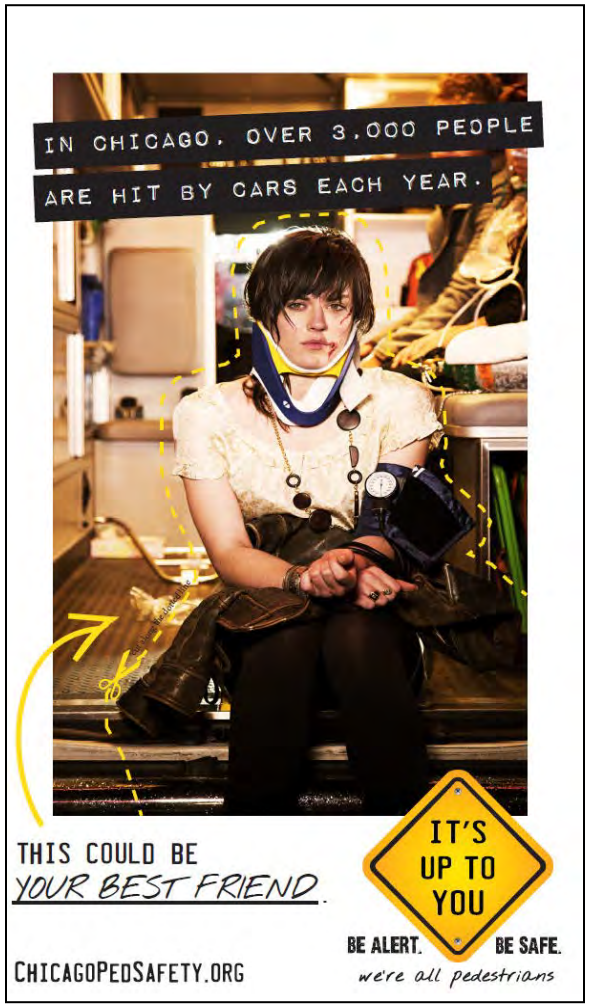
Provocative

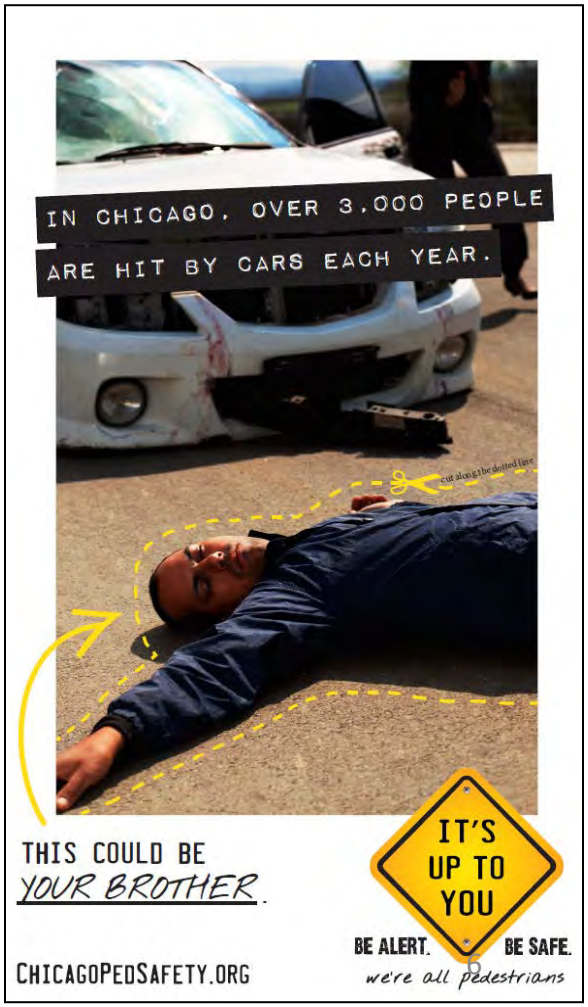
Hard Hitting

ChicagoPedSafety.org

We are all pedestrians

Pedestrian Awareness Ads





Pedestrian Awareness Ads

Mannequins


ONE
OF
32
PEDESTRIANS
KILLED LAST YEAR
IN CHICAGO


IT'S
UP TO
YOU
BE ALERT.
BE SAFE
we're all pedestrians
CHICAGOPEDSAFETY.ORG


ONE
OF
32
PEDESTRIANS
KILLED LAST YEAR
IN CHICAGO

Pedestrian Flags

Statistics

Taxi Bumper Stickers

Sidewalk Applications

30’’

Police Training Bulletin

A Knowledge Resource for Members of the Chicago Police Department

Education and Training Division
Distribution: To All Sworn Personnel
Related Material: Municipal Code of Chicago, State of Illinois Statutes
Contributors: Chicago Department of Transportation
Release Date:

ETB# 12-01

PEDESTRIAN SAFETY

The Chicago Police Department (CPD) and the Chicago Department of Transportation (CDOT) have launched a Pedestrian Safety Campaign to make Chicago streets safer for pedestrians of all ages. The CPD can conduct crosswalk enforcement missions at the district level and relies on all officers to enforce driver violations that compromise pedestrian safety.

Pedestrian safety is essential for vibrant, livable and healthy communities. In Chicago between 2005 - 2009, 251 sons, daughters, wives, husbands, and family members were killed in crashes involving pedestrians and motor vehicles. Additionally, 2,744 pedestrians suffered incapacitating injuries and 17,487 total pedestrian crashes were recorded citywide. The City's goal is to eliminate all crash fatalities within ten years, and to reduce injuries by 50%.

Drivers have a larger responsibility than pedestrians in avoiding crashes because of the severity of injury that can be caused by a vehicle. To make Chicago streets safe for everyone, it is important to understand and enforce local and state laws that define driver and pedestrian responsibilities. **With your help, pedestrian crashes can be prevented.**

Who,Where, When and Why of Pedestrian Crashes

Who?
- Children are most likely to be involved in a crash.
- Senior citizens and children have the highest risk of being killed in a crash.
- Nearly 25% of victims of fatal and serious injuries were 0-18 years old.

Where?
- Over 3/4 of crashes occur near an intersection.
- Half of all crashes occur on busy streets.
- 85% of crashes occur near a park or school.
- High crime areas see larger numbers of crashes.

When and Why?
- School dismissal coincides with the highest number of crashes (3:00-6:00 PM).
- "Failure to Yield" to pedestrians is the most common driver violations.
- Vehicle turning movements are extremely dangerous for pedestrians.

1

All Officer E-Learning Course

Crosswalk Enforcement Procedures

Driver Information Flyer

YOU HAVE JUST FAILED

TO STOP FOR A PEDESTRIAN IN A CROSSWALK

Drivers must STOP for pedestrians in crosswalks, even if there is no signal or sign. It's the law!

- Each year, an average of 59 pedestrians are killed in Chicago by motor vehicles.
- Failing to yield to pedestrians is the most common cause of crashes.
- At signalized intersections, the majority of pedestrian crashes are caused by turning vehicles.

THE LAW IN ILLINOIS IS CLEAR

- Drivers must stop for pedestrians in crosswalks.
- Pavement markings are not required for crosswalks at intersections.
- Drivers may not overtake other drivers stopped at a marked or unmarked crosswalk.
- Turning vehicles must yield to pedestrians crossing who have begun crossing during the WALK signal.

Drivers and pedestrians alike have a responsibility to look out for each other.

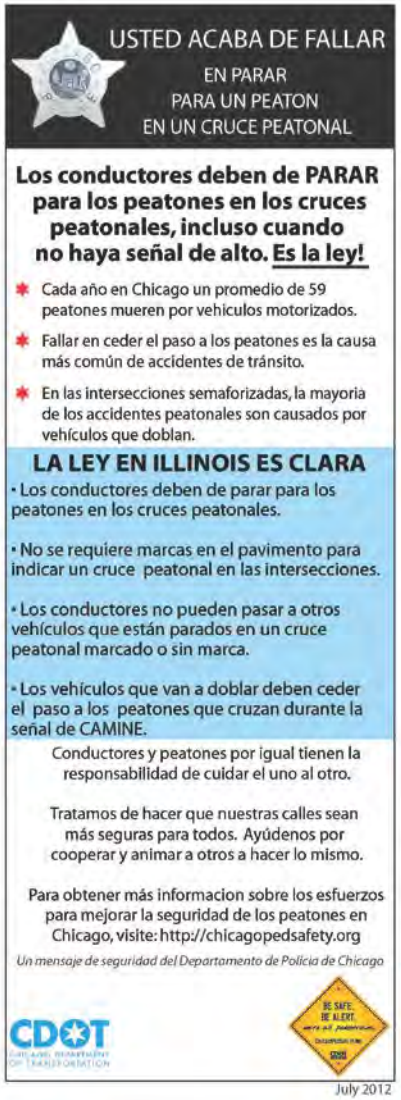
We're trying to make streets safer for you and your family. Help us by cooperating and by encouraging others to do the same.

For more information on efforts to improve pedestrian safety in Chicago, visit: http://chicagopedsafety.org

A safety message from the Chicago Police Department

CDOT

July 2012



USTED ACABA DE FALLAR

EN PARAR
PARA UN PEATON
EN UN CRUCE PEATONAL

Los conductores deben de PARAR para los peatones en los cruces peatonales, incluso cuando no haya señal de alto. Es la ley!

- Cada año en Chicago un promedio de 59 peatones mueren por vehiculos motorizados.
- Fallar en ceder el paso a los peatones es la causa más común de accidentes de tránsito.
- En las intersecciones semaforizadas, la mayoria de los accidentes peatonales son causados por vehículos que doblan.

LA LEY EN ILLINOIS ES CLARA

- Los conductores deben de parar para los peatones en los cruces peatonales.
- No se requiere marcas en el pavimento para indicar un cruce peatonal en las intersecciones.
- Los conductores no pueden pasar a otros vehículos que están parados en un cruce peatonal marcado o sin marca.
- Los vehículos que van a doblar deben ceder el paso a los peatones que cruzan durante la señal de CAMINE.

Conductores y peatones por igual tienen la responsabilidad de cuidar el uno al otro.

Tratamos de hacer que nuestras calles sean más seguras para todos. Ayúdenos por cooperar y animar a otros a hacer lo mismo.

Para obtener más informacion sobre los esfuerzos para mejorar la seguridad de los peatones en Chicago, visite: http://chicagopedsafety.org

Un mensaje de seguridad del Departamento de Policia de Chicago

CDOT

July 2012

Thank You!

David Smith, Transportation Planner

david.smith@tylin.com

DOT HS 812 082
August 2016

U.S. Department of Transportation
National Highway Traffic Safety Administration

NHTSA

12521-090116-v2