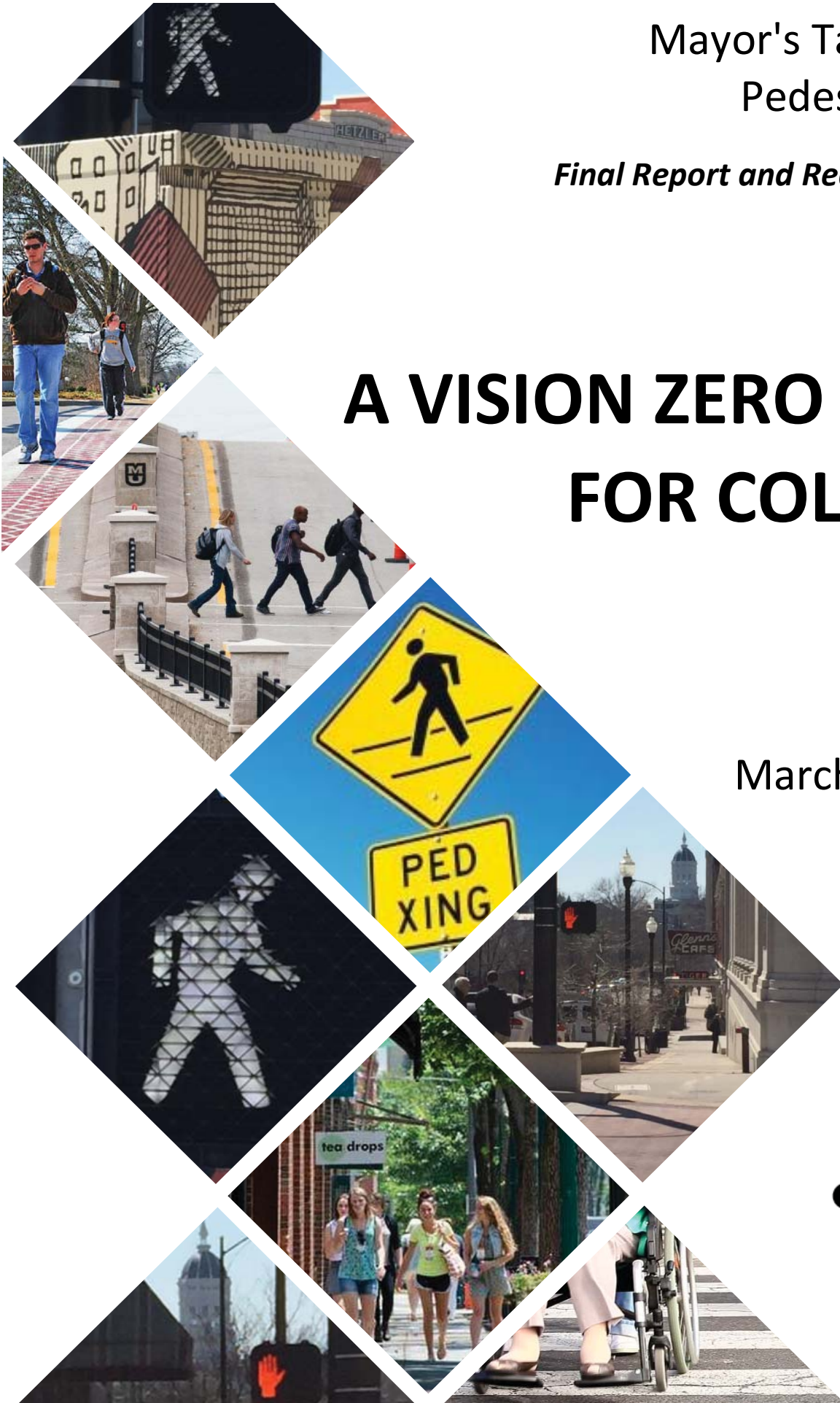


Mayor's Task Force on
Pedestrian Safety

Final Report and Recommendations

A VISION ZERO POLICY FOR COLUMBIA

March 25th, 2016





MAYOR'S TASK FORCE ON PEDESTRIAN SAFETY

RECOMMENDATIONS FOR CITY COUNCIL ACTION

VISION ZERO

- Adopt a "Vision Zero" policy

EDUCATION

- Adopt a "One Percent for Safety Education" policy
- Develop a comprehensive traffic safety education and communication campaign
- Work with other organizations to develop education campaigns and policies
- Promote all traffic safety innovations and improvements

ENFORCEMENT

- Increase funding for police traffic safety enforcement
- Prohibit cellphone use and texting while driving
- Reduce legal, posted speed limits
- Improve and reform enforcement of speed limits and prosecution of violators
- Specifically, utilize automated enforcement such as red light cameras and speed cameras
- Improve coordination and data-sharing among law enforcement, other agencies, and the public
- Provide routine bicycle and pedestrian safety training for law enforcement officers

ENGINEERING

- Start a new program of Road Safety Audits and Assessments
- Create a new position of Traffic Safety Engineer/ Crash Analyst
- Identify engineering design parameters that contribute to pedestrian deaths and injuries
- Improve and reform road design and engineering standards to increase safety

Executive Summary

In a seven-month period in late 2014 and early 2015, four pedestrians were killed and at least six others were injured in a spate of collisions in and just outside Columbia. Three of these incidents (one death, two injuries) happened on the same day.

In response, Mayor Bob McDavid and the City Council established a Mayor's Task Force on Pedestrian Safety on May 18th, 2015. The Task Force consisted of fifteen Columbia citizens, including representatives of several City Commissions, Missouri Department of Transportation, University of Missouri, Columbia Public Schools, various non-profit organizations, neighborhoods, and the health care sector. It was supported by City staff from Community Development, Parks and Recreation, Columbia Police Department, and Public Works, and it was co-chaired by us.

The charge for the Task Force was to "... evaluate available resources and provide recommendations on what can be done by the City government and by citizens themselves working in a cooperative way to decrease collisions between automobiles and pedestrians. The evaluation shall include, but not be limited to:

- Analysis of the problem;
- Education and community outreach strategies;
- Law enforcement strategies and policies; and
- Engineering solutions."

After thirteen meetings during the last 9 months, we are pleased to present our Final Report and Recommendations, titled "A Vision Zero Policy for Columbia." As you will read, "Vision Zero" is a philosophy of transportation system design and operations that asserts:

1. Safety is the most important factor in transportation planning;
2. Traffic deaths and serious injuries are preventable and, therefore, unacceptable;
3. Transportation systems should be designed so that user errors are not fatal.

When these three statements comprise the foundation of the transportation planning process, there are fewer traffic crashes, and fewer deaths and serious injuries of pedestrians, motorists, and all other types of road users. The success of Vision Zero to save lives has been demonstrated in cities across the United States and throughout the world.

Our first recommendation to the City Council is to adopt a Vision Zero policy. This will establish a framework for the other fifteen recommendations, based on the "Three Es" - Education, Enforcement, and Engineering. Each recommendation is supported with detailed background information, a reasonable timeline for implementation, and a viable funding strategy.

To underscore the urgency of these recommendations, we draw attention to a very recent report by the Governors Highway Safety Association [1], projecting that 2015 data on pedestrian fatalities in the U.S. will show a 10% spike over 2014. As we finalize this report, we note with sadness the death of yet another pedestrian in Columbia, struck by a bus on March 7th, 2016.

***Ian Thomas, Task Force Co-Chair and Ward 4 City Councilmember
Clyde Ruffin, Task Force Co-Chair and Ward 1 City Councilmember
March 25th, 2016***

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Chapter 1: Background to Task Force

Section 1-1: Pedestrian Deaths and Injuries in Columbia

In late 2014 and early 2015, four pedestrians were killed and at least six others were injured in a series of motor vehicle collisions in the Columbia area (see Appendix A). Three of these incidents occurred on the same day - January 22nd, 2015.



Also in January, 2015, United States Secretary of Transportation Anthony Foxx announced his "Mayor's Challenge for Safer People, Safer Streets" campaign. This national initiative was focused on improving pedestrian safety in response to an increasing number of pedestrian fatalities in the United States in recent years. From 2009 to 2014, the number of pedestrians killed in collisions with motor vehicles rose from 4,109 to 4,884 - almost a 20% increase in just 6 years.

In response to these events, the City of Columbia's Bicycle and Pedestrian Commission invited Mayor Bob McDavid to attend their April, 2015 meeting. At the meeting, Commissioners asked him to participate in the "Mayor's Challenge" event and establish a commission or task force to address pedestrian safety.

Section 1-2: Formation of the Mayor's Task Force on Pedestrian Safety

At the April 20th, 2015 City Council meeting, Mayor McDavid stated that he would announce the formation of a Pedestrian Safety Task Force during the annual Bike, Walk, and Wheel Week event. He gave credit to the Bicycle and Pedestrian Commission and Council member Ian Thomas, for providing the motivation for this initiative.

The Mayor asked that the Task Force ultimately provide infrastructure priority recommendations, as well as suggested metrics to allow for measurement of safety improvements. He noted that membership would likely include representatives of the Bicycle and Pedestrian Commission, Disabilities Commission, Public Transit Advisory Commission, PedNet Coalition, Columbia Public Schools, Missouri Students Association, and others. On May 8th, a press release (see Appendix B) was issued containing the formal announcement of the Task Force.

The Mayor's Task Force on Pedestrian Safety was established by City Council Resolution R 84-15 (see Appendix C) on May 18th, 2015. Two weeks later, on June 1st, 2015, Mayor McDavid appointed fifteen community members to the Task Force and announced that Council members Clyde Ruffin and Ian Thomas would serve as co-chairs. It was also agreed that the Task Force would be staffed by the Planning Division of the Department of Community Development.

Community members appointed to the Task Force at the June 1st, 2015 Council meeting are listed below, along with their affiliations:

- James Beattie (Missouri Department of Transportation)
- Marin Blevins (Parks and Recreation Commission)
- Nate Brown (neighborhood representative)
- Tec Chapman (Services for Independent Living)
- Katie Essing (Downtown CID)
- Steven Hanson (Public Transit Advisory Commission)
- Leeann Johnson (Trauma Program Manager, Frank L. Mitchell, Jr., MD Trauma Center at MU Health Care)
- Kyle Riley (Phoenix Programs)
- Rachel Ruhlen (Bicycle and Pedestrian Commission)
- Frank Schmidt (University of Missouri)
- Lawrence Simonson (PedNet Coalition)
- Michael Szewczyk (Physician, Boone Hospital Center)
- Amy Wasowicz (Missouri Students Association)
- John White (Columbia Public Schools)
- Dawn Zeterberg (Disabilities Commission)
- Clyde Ruffin (City Council, Co-Chair)
- Ian Thomas (City Council, Co-Chair)
- Mitch Skov (City of Columbia, Community Development)

Biographies of all of the Task Force members are included in Appendix D.

Amy Wasowicz was nominated by the Missouri Students Association (MSA) to represent them on the Task Force. However, because Amy was out of town for the summer, Syed Ejaz was initially appointed as the MSA representative, and he attended the June, July, and August meetings. When Amy returned to Columbia, she was formally appointed to the Task Force and participated in the remaining meetings.

The City Council resolution establishing the Task Force specified that the Task Force would provide a report to the City Council of its findings and recommendations by May 16th, 2016, at which time its work would be concluded and it would be formally dissolved.

Chapter 2:

Summary of Task Force Meetings

Section 2-1: Introduction

The Mayor's Task Force on Pedestrian Safety held a total of thirteen meetings, with City Council members Clyde Ruffin and Ian Thomas serving as non-voting Co-Chairs.

From June through October, 2015, the entire Task Force met monthly and received presentations from various stakeholder groups. For the next three meetings (November, 2015 through January, 2016), three subcommittees met independently to discuss specific approaches to improving pedestrian safety. During the final five meetings in February and March, 2016, the Task Force compiled all of its findings and recommendations into this report.

Section 2-2: Initial "Information-Gathering" Meetings (June-October, 2015)

The initial five meetings were focused on information gathering, including presentations made by a number of stakeholder groups in regard to pedestrian safety. The Task Force also discussed the various causes and issues related to collisions between motor vehicle and pedestrians. The presentations made at the initial five meetings were as follows:

- June 30th: Columbia Police Department presentation on pedestrian/auto crash incidents
- July 21st: Pedestrian design/facilities presentation by City of Columbia Public Works and MoDOT Central District Office
- August 18th: Presentations by Missouri Students Association, University of Missouri Police, and University of Missouri Parking Administration on campus issues
- September 15th: Great Plains ADA Center presentation on pedestrian safety for persons with disabilities and senior citizens; Columbia Public Schools presentation on pedestrian safety for children
- October 20th: PedNet Coalition presentation on Vision Zero philosophy of roadway safety

The meeting presentations highlighted the fact that pedestrian safety is impacted by a variety of different issues. These include street and crosswalk design, sidewalk availability and condition, traffic signal timing and facilities/design, traffic regulations, enforcement of safety laws, and motorist and pedestrian behavior and attitudes. It was agreed that all of these issues must be addressed to improve pedestrian safety.

The October 20th presentation by the PedNet Coalition focused on "Vision Zero" - a philosophy of roadway safety that originated in Sweden and is currently gaining widespread support across the United States. Within the last 2 years, Vision Zero Policies have been adopted by more than a dozen U.S. cities, including New York City, San Francisco, and Seattle. As a result of these policies, Vision Zero cities have designed and launched comprehensive strategies to address safety for all users of the roadway system - pedestrians, bicyclists, transit users, and motorists - focusing on education, policy/enforcement, and design/engineering.

Vision Zero is a philosophy for transportation system design and operation which makes the following three assertions:

1. Safety is the most important factor in transportation planning;
2. Traffic deaths and serious injuries are preventable and, therefore, unacceptable;
3. Transportation systems should be designed so that user errors are not fatal.

By embracing this philosophy in all aspects of design and operation, cities and other jurisdictions with responsibility for transportation systems give equitable consideration to all road users - those in motor vehicles and those using all types of non-motorized modes. Particular attention must be devoted to the needs of the most vulnerable road users - pedestrians, cyclists, children, senior citizens, and people with disabilities - who are most at risk on the roadway system. As its name implies, the goal of Vision Zero is to have zero traffic-related deaths and serious injuries.

At around this same time (fall, 2015), the PedNet Coalition was awarded a Missouri Foundation for Health grant for the purpose of conducting an advocacy and education campaign about the Vision Zero concept. The grant includes funding for potential partnerships with City of Columbia departments, such as Public Works, Columbia Police Department, and the Health Department, to develop and implement a Vision Zero strategy.

Section 2-3: Meetings of the Three Subcommittees (November, 2015 - January, 2016)

In October, the Task Force came to a consensus that breaking into subcommittees to study specific aspects of pedestrian safety would be the appropriate way to proceed for the next few months. The structure of these subcommittees was the so-called “Three E’s” framework, which focuses on the components of Education, Enforcement, and Engineering as being equally important in addressing the issues of pedestrian safety.

The fifteen Task Force members divided themselves equally among the three subcommittees, based on their personal interests and preferences. In addition, the Task Force Co-Chairs appointed a maximum of two additional citizen non-Task Force members to sit in on each of the subcommittees to provide additional input and community representation. Appointed to the Engineering subcommittee as additional members were Carrie Gartner and Joe Alder. Appointed to the Education subcommittee were Katherine Lee and Joseph Sell. The Enforcement subcommittee did not include any official additional members, although Ann Marie Gortmaker attended all of those subcommittee meetings.

In addition to Mitch Skov (Community Development), several other City staff members attended the Task Force meetings and served a vital role in support of the subcommittees. These include Janet Godon (Parks and Recreation/GetAbout Columbia) who participated in the Education subcommittee meetings; Lt. Krista Shouse-Jones and Sgt. Curtis Perkins (Columbia Police Department), who supported the Enforcement subcommittee; and Richard Stone (Public Works) with the Engineering subcommittee.

Large numbers of interested members of the public and media representatives (as many as 20-30) observed the full Task Force meetings between June and October. They were also invited to attend the subcommittee meetings, and many did.

November 17th Meeting

The three independent subcommittee meetings occupied the first part of the meeting time, with the whole Task Force reconvening after one hour. At the meeting of the entire group, each of the subcommittees gave a brief overview of their meetings as follows:

Education (Co-Chairs Michael Szewczyk and Leeann Johnson) – the group noted that the City's GetAbout Columbia initiative and the PedNet Coalition have conducted a number of programs related to pedestrian safety. They also stated that a variety of groups need to be educated on pedestrian safety, including pedestrians generally, bicyclists, motorists, students, voters, and visitors to Columbia.

Enforcement (Co-Chairs Nate Brown and Lawrence Simonson) – this subcommittee concluded that there needs to be a discussion about mechanisms for increasing the number of officers in the Police Department's Traffic Unit, in order have more enforcement-related impact on reducing traffic crashes. [Note - in late November, shortly after the meeting, Police Chief Ken Burton announced that the Traffic Unit would be closed in order to assign officers to other duties.]

Engineering (Co-Chairs Rachel Ruhlen and Steven Hanson) – this group suggested creating new specifications for pedestrian facilities based on street classifications, with the recommendations varying depending on the street type, traffic volumes, adjacent land uses, density, etc. Their opinion is that major improvements to safety can be made with an incremental approach, e.g. starting with pavement paint treatments.

When the entire Task Force reconvened for the final 30 minutes of the meeting, each of the subcommittees reported that they had discussed and very much supported the Vision Zero philosophy. At this time, the Task Force unanimously passed a motion to adopt Vision Zero as its organizational framework for improving pedestrian safety in Columbia.

In further discussions, several Task Force members expressed their support for one of their formal recommendations to the City Council being to "adopt a Vision Zero policy" and "implement a Vision Zero strategy."

December 15th Meeting

Subcommittee meetings were again held for the first hour, as follows:

Education - the subcommittee reviewed Vision Zero programs currently in operation and also discussed who should be the target audience of educational efforts. Of specific concern was the issue of distracted driving and disrespect among road users. The subcommittee proposed that 1% of the cost for major roadway projects be devoted specifically to safety education.

Enforcement – various traffic safety enforcement strategies were considered, including courtesy warnings, speed cameras and red light cameras, bicycle police officers, and traffic calming. The impending elimination of the Columbia Police Department's Traffic Unit police was discussed as was the idea of making an official recommendation to reinstate it.

Engineering – the group reported that a number of good ideas mentioned in their meeting were already in progress, such as a re-examination of speed limits relative to road design.

At the combined Task Force meeting, Co-Chair Ian Thomas discussed a memo that he had prepared in response to a question from Michael Szewczyk the previous month about the implementation budget (see Section 5-2). The memo emphasized that, while no budget was currently allocated for implementation of the Task Force's recommendations, the subcommittees should identify and propose a range of strategies. Thomas gave examples of “no cost” strategies (such as speed limit reduction) and “high cost” strategies (such as roadway reconfiguration), and also emphasized that all recommendations should be as specific and implementable as possible.

It was noted that the January meeting would be the last opportunity for the subcommittees to meet independently.

January 19th Meeting

Subcommittee meetings were held for the first hour of the scheduled meeting. Reviews of their meetings as presented by a representative of each group are as follows:

Education - subcommittee co-chair Michael Szewczyk reviewed the groups points of consensus and a list of 15 recommendations - the most important recommendations were:

1. The City should adopt a Vision Zero policy
2. The City should adopt "1% for Safety Education" policy that would fund educational programs through 1% of the budget for each major road project.

Enforcement – the group’s top five draft priorities were noted:

1. Funding for more traffic enforcement
2. Reduced speed limits
3. Prohibition of cell phone use (both talking and texting) while driving
4. Providing ongoing high visibility traffic enforcement
5. Install speed and/or red light cameras

Engineering – this subcommittee reviewed possible draft recommendations for the Task Force final report, which included creating a new position of Traffic Safety Engineer/Crash Analyst and revising design and engineering standards to make safety the highest priority.

At the conclusion of the meeting, Co-Chair Thomas asked that each subcommittee provide the following for discussion at the February meeting:

- A list of 3-6 "points of consensus" about pedestrian safety (or the lack of it), that provide insight into ways to increase safety, and that 100% of the members agree with;
- A 300-500 word narrative introduction to describe the role of that particular "E" in improving pedestrian safety and how the group went about developing recommendations;
- A list of 5-10 specific recommendations with some indication of a desired timeline and who is responsible for each one.

Each subcommittee agreed on its own strategy to complete these assignments, including email discussions and holding an additional meeting.

Section 2-4: Meetings to Finalize Report and Recommendations (February-March, 2016)

During the final meetings of the Task Force (February 16th, March 1st, March 15th, March 17th, and March 22nd), several concluding tasks were accomplished:

- The subcommittees' "Points of Consensus" were discussed, consolidated, and finalized into a single list, which was approved by unanimous vote on March 17th (see Section 4-2);
- The subcommittees' individual "Recommendations for City Council Action" were discussed, consolidated, and finalized into a single list, which was approved by unanimous vote on March 17th (see Section 5-3);
- Detailed justifications and explanations were developed, discussed at length, and finalized for each Recommendation, and the entirety of Chapter 5 was approved by unanimous vote on March 22nd (see Section 5-4);
- A letter was drafted and sent to certain members the Missouri General Assembly, providing the Task Force's input on various proposed pieces of legislation related to cellphone use and texting while driving (see Appendix F);
- The final recommendations were "tested" by re-examining three of the pedestrian fatalities and projecting how the outcomes might have been different had the recommendations been implemented at that time;
- The Task Force discussed how progress would be measured and a new section titled Evaluation and Accountability was written (see Section 5-5);
- The Final Report and Recommendations was approved by unanimous vote on March 22nd.

Chapter 3: Vision Zero Philosophy

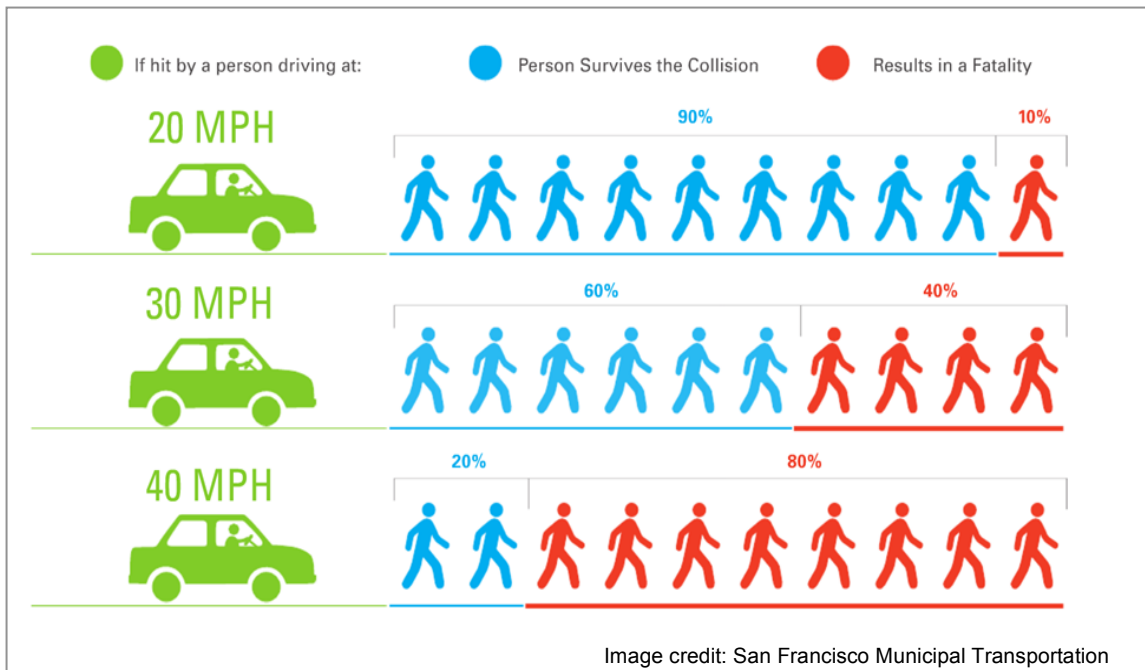
Section 3-1: Introduction

The Task Force investigated an approach to road safety that has a proven track record of saving lives and preventing serious injuries, particularly among pedestrians. This approach is called Vision Zero, and is gaining tremendous momentum in cities across the country.

Vision Zero is a policy goal and data-driven strategy to achieve zero traffic fatalities or serious injuries across all forms of road transportation. A Vision Zero philosophy shifts away from the idea of “acceptable” levels of risk and toward the belief that all traffic deaths and serious injuries are both preventable and ethically unacceptable. Vision Zero influences road design, enforcement, and culture to bring about a marked reduction in crashes that lead to death and serious injury.

Vision Zero is comprehensive: it considers all road users and values the safety of people walking, biking, driving, using a wheelchair, and taking the bus. This approach examines how different types of road users interact, and prioritizes the safety of vulnerable road users, such as pedestrians, because by definition they are the most likely to be killed or injured if there is a crash.

Road travel is associated with a culture that accepts deaths and serious injuries as an unfortunate but unavoidable cost of modern mobility and freedom. This is in contrast to other transportation modes, such as air travel, where zero fatalities are tolerated. Vision Zero challenges this culture of acceptance and demonstrates that all roadway fatalities and serious injuries are preventable.



Speed is the major determining factor in whether or not a crash will result in death or serious injury, especially for pedestrians. While a low-speed crash between a person walking and a person driving is unlikely to kill the pedestrian, a high-speed crash almost certainly will. High-speed fatalities, therefore, are entirely preventable by simply reducing the speed of the vehicles.

Advocates for a Vision Zero philosophy encourage the use of the term “crash” instead of “accident,” because “accident” implies that nothing could have been done to prevent it. While it may not be possible to prevent all crashes, it is possible to prevent crashes from resulting in deaths and serious injuries.

The road transportation system typically places responsibility for safety on road users. Each driver, pedestrian, wheelchair user, transit rider, or bicyclist is expected to follow the rules of the road precisely and never make a mistake. This type of approach does not account for human error and is in contrast to other transportation systems such as air and rail that are built assuming that their users are going to make mistakes.

Vision Zero instead places responsibility on the system design and the people who influence the design. The road system can be built to absorb human error or prevent it. Road design and policy can encourage either safe or dangerous transportation behaviors.

In summary, Vision Zero is a philosophy for transportation system design and operation which asserts:

1. Safety is the most important factor in transportation planning;
2. Traffic deaths and serious injuries are preventable and, therefore, unacceptable;
3. Transportation systems should be designed so that user errors are not fatal.

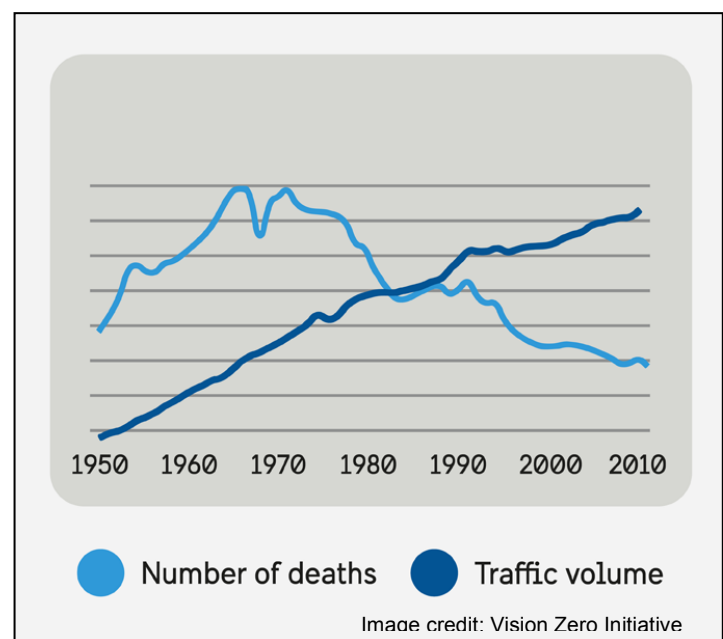
If we accept these assertions, we have an ethical obligation to bring about change in the transportation system to prevent serious injuries and save lives.

Section 3-2: History of Vision Zero

Vision Zero originated in Sweden, where it was adopted as a national policy goal in 1997.

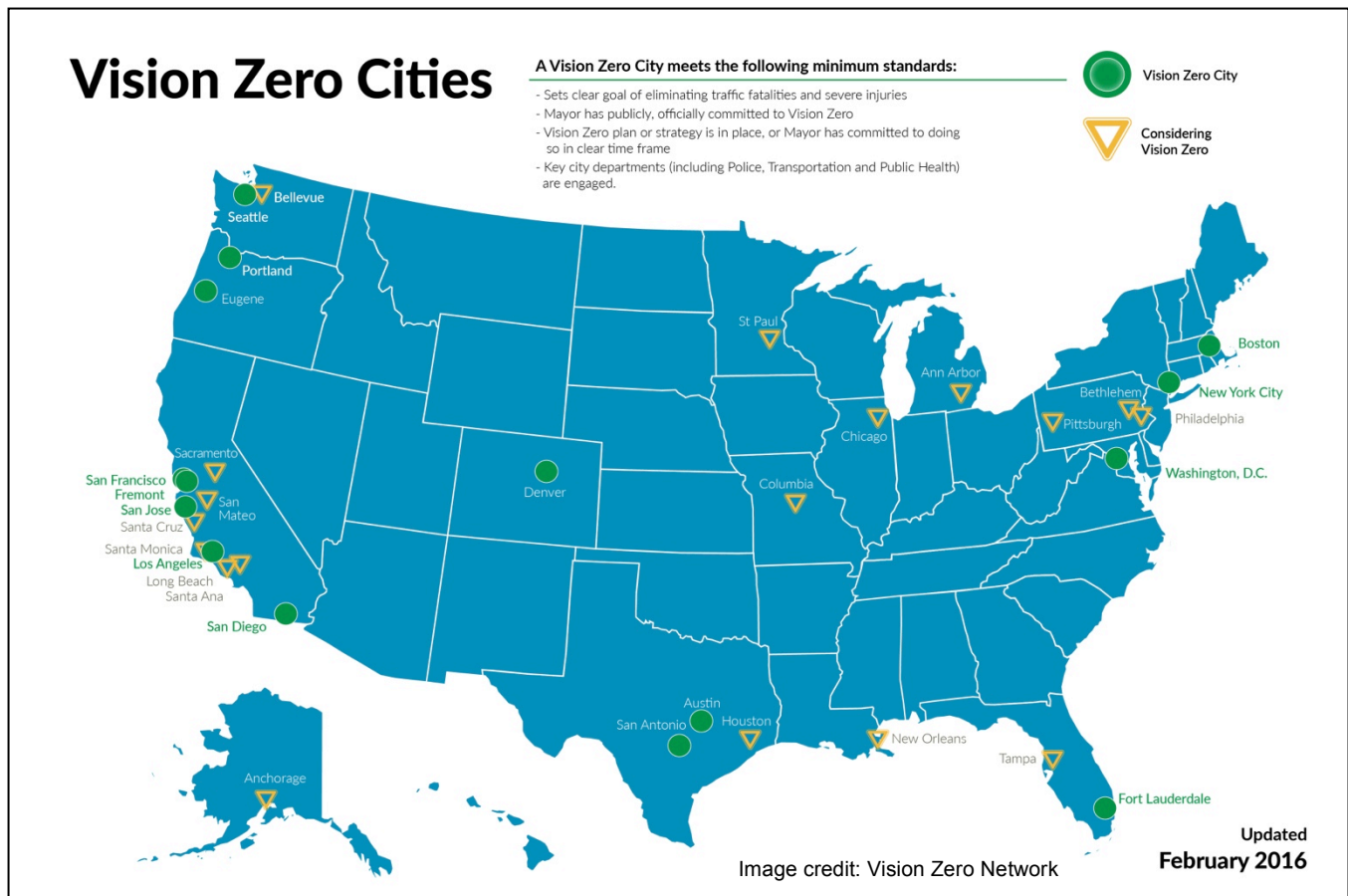
Since that time, Sweden has seen a steady decline in traffic fatalities despite growing traffic volume. From 1990 to 2010, taking into account the rise in traffic volume, Sweden experienced a 73% reduction in road fatalities [2].

Vision Zero has also proven to be an effective approach for protecting vulnerable road users. Over the last 5 years alone, Sweden has seen a 50% reduction in pedestrian fatalities [3]. And in 2012, in the entire country of Sweden with a population of over 9 million, there was only one fatality of a child under age seven, compared to 58 fatalities in 1970 [4].



As a result of the success of Vision Zero in Sweden, the World Health Organization has recognized Vision Zero as a best practice that should be replicated in other countries [5].

In the last two years, Vision Zero has gained serious traction across the United States as city leaders and advocates have searched for a solution to the crisis of traffic deaths and serious injuries.



Since 2014, fifteen cities have passed Vision Zero policies, including New York City, San Francisco, Boston, Portland and Seattle. An additional eighteen cities are in the process of considering Vision Zero policies.

While the early adopters of Vision Zero have tended to be large cities, several smaller and mid-size cities have also adopted or are considering Vision Zero policies: Bellevue, WA (134,000), Eugene, OR (159,000), Fremont, CA (225,000), Ann Arbor, MI (117,000), and Bethlehem, PA (75,000).

Section 3.3: Vision Zero Case Studies

The cities and countries that adopt Vision Zero all share the goal of achieving zero traffic fatalities or serious injuries. As Vision Zero is data-driven, however, the strategy to achieve that goal must by necessity be responsive to the crash data for each particular area. Analyzing the crash data informs the Vision Zero strategy by answering questions such as:

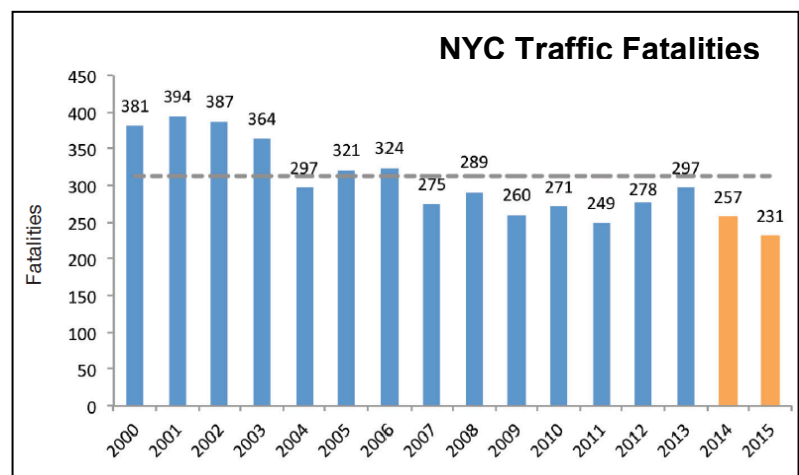
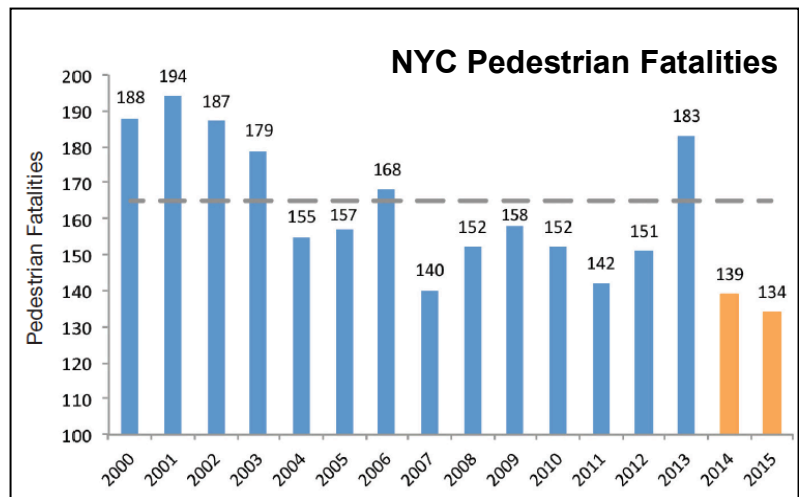
- Where are fatal and serious injury crashes happening?
- What types of road users are involved in these crashes?
- What factors are contributing to the crashes?
- What proven interventions could be used to prevent the crashes?

In 2014, New York City became the first U.S. city to adopt a Vision Zero policy. Recognizing that “the primary mission of government is to protect the public,” Vision Zero was championed by Mayor Bill de Blasio as a way to change the status quo and systematically address the crashes that were seriously injuring or killing New Yorkers every 2 hours [6].

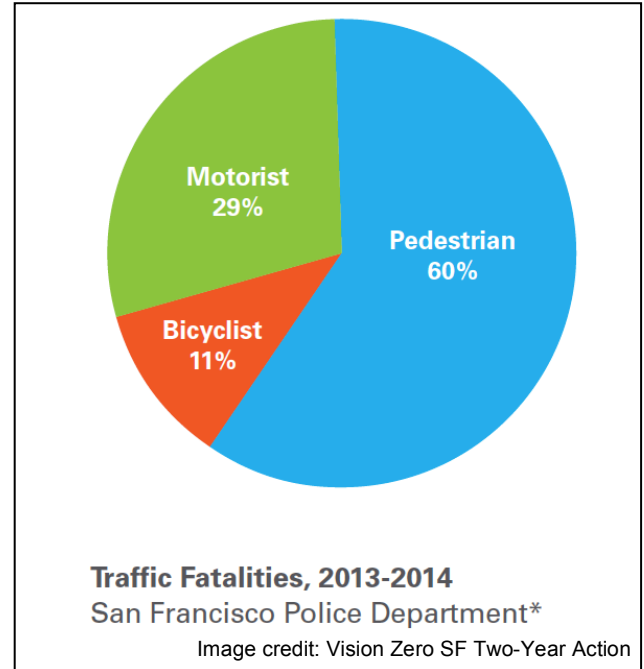
New York City’s Vision Zero strategy is a collaborative effort among multiple city departments: Transportation, Police, Taxi & Limousine Commission, Health & Mental Hygiene, Education, and Citywide Administrative Services. The Mayor’s Office created a permanent Vision Zero task force, comprised of key government, advocacy and private sector partners, to implement and extend the plan. Key Action Plan strategies include:

- Publishing crash and safety data regularly in user-friendly formats
- Ad campaign aimed at reducing speeding, failure-to-yield and other forms of reckless driving
- Increasing the number of law enforcement personnel and enforcement against dangerous transportation behaviors
- Education outreach to students on safe pedestrian behaviors and their parents on how to make school zones safe
- Engineering improvements at targeted intersections and corridors
- Lowering speed limits and installing traffic calming measures
- Including traffic fatality and injury prevention messages in public health materials
- Leading a state legislative campaign to give the city authority to use speed and red-light cameras, reduce city speed limits, and increase penalties for dangerous driver behaviors

New York City’s Vision Zero strategy, even with only 2 years of implementation, has been a resounding success. 2015 was the safest year ever on New York City streets. Overall traffic fatalities reached their lowest level since record-keeping began in 1910, down 22% compared to 2013 before Vision Zero launched [7]. For pedestrians, safer streets came even sooner. In 2014, the first year of Vision Zero implementation, the number of pedestrian fatalities reached the lowest level ever recorded – and 2015 beat that record low.



San Francisco



San Francisco adopted a Vision Zero policy in 2014, with a goal of eliminating traffic fatalities by 2024 [8].


Vision Zero SF is supported by resolutions of multiple agencies and departments including the Office of the Mayor, Municipal Transportation Agency, Police, Fire, Department of Public Health, Planning, Environment, Youth Commission, Disability Council, and the Board of Education of the Unified School District.

Social equity is at the core of San Francisco's Vision Zero strategy. The City identified that 70% of their severe injury and fatal crashes occurred on only 12% of city streets, and identified these as a "High Injury Network." Half of these high-risk streets pass through low-income neighborhoods, communities of color, senior housing, and areas where people rely on walking and transit as their primary form of transportation. San Francisco's Vision Zero strategy prioritizes safety on these streets and in these neighborhoods, to ensure that all community members can travel safely.

Key Action Strategy components:

- Creation of a Vision Zero Task Force led by City staff, an expansion of the Pedestrian Safety Task Force
- Expediting the building of 24 street engineering projects to address an increase in fatalities on high injury corridors among people walking and biking
- Expanding Safe Routes to School programs to allow students to walk and bike to school safely
- Partnering police crash data with hospital patient records to create a better picture of street safety, especially for crashes involving people walking and biking which are tremendously underreported
- Passing a street and transit bond with over \$150 million dedicated to street safety projects
- Advocating for changes to state law to allow the City to use automated speed enforcement near schools and housing for seniors and people with disabilities

Seattle



The average car trip in Seattle is 3.5 miles. Reducing the speed limit from 35 to 30 mph will add about a minute to this trip (or 17 seconds per mile), assuming free flowing traffic

Seattle has been recognized as one of the safest cities in the country, with a fatality rate close to that of Sweden, and was recently named the safest city in the U.S. for pedestrians [9]. However, recognizing that even one death is unacceptable, in 2015 Seattle adopted a Vision Zero plan to end traffic deaths and serious injuries by 2030 [10].

Key Near-Term Actions:

- Create a 20 MPH Zone Program to reduce residential speed limits to 20 mph on streets with high collision history or near schools or parks
- Reduce arterial speed limits to 30 mph or lower
- Data-driven pedestrian safety improvements in downtown, including leading or lagging pedestrian intervals, protected turn phases, elimination of dual turn lanes, signal improvements, and no turns on red
- Develop protected bike lanes
- Transit improvements to increase pedestrian safety and access to transit stops and stations
- Safe Routes to School infrastructure improvements near schools
- Automated enforcement in school zones

Section 3.4: A Vision Zero Policy for Columbia

Columbia is lagging behind other cities that are prioritizing transportation safety. While many leading Vision Zero cities are experiencing a decline in traffic fatalities, Columbia’s fatality rate has shown no significant decline, with an average of 9 fatalities per year. This corresponds to a rate of 7.8 fatalities per 100,000 people – much higher than New York City, San Francisco, Seattle, Boston, Washington, D.C., or Los Angeles [11].

	Road Fatality per 100,000 people	2012 Fatalities	Population
Sweden*	3.0	285	9,500,000
United States*	11.6	36166	313,900,000
Washington State	6.4	444	6,897,012
King County	4.3	85	1,957,000
Seattle	3.2	20	634,535
Portland	5.3	32	603,106
New York City	3.2	268	8,336,697

Image credit: Seattle Vision Zero Plan

Columbia community members want transportation to be safer.

In the 2040 Long-Range Transportation Plan, the Columbia Area Transportation Study Organization (CATSO) identified improved transportation safety as a community need and 90% of the citizen respondents supported improvement or expansion of infrastructure for walking and biking [12]. Columbia's Community Vision Statement for transportation states that citizens should be able to "move about freely within the region using whatever means are desired – automobile, bus, bicycle, walking – and to do so safely" [13].

Columbians want safer transportation, but the City does not currently have an actionable strategy to prevent crashes through data-driven action steps. For example, the CATSO Long-Range Transportation Plan includes an objective to design "streets and highways that are safe and efficient to move vehicular traffic and accommodate transit, pedestrians and bicyclists" [12], but the objective has no associated safety performance measure and there is no process in place to evaluate crashes and prevent reoccurrence. Vision Zero will help Columbia set and meet safety goals.

Adopting a Vision Zero policy and strategy can be a critical component of the City's recent Strategic Plan emphasis on social equity. Vision Zero strategies can improve transportation safety for all Columbia residents because everyone uses some form of transportation, but can especially improve outcomes for underserved persons (e.g., people of color, low-income families, children, older persons, people with diverse abilities) and vulnerable road users (e.g., people walking or biking). These groups are at greater risk of traffic injury and death because the transportation system is most ill-fitted to their needs.

In Boone County, the motor vehicle traffic death rate for African Americans is nearly twice that of whites and traffic-related emergency room visits are three times as high [14]. Older adults compose 17% of the population [15], but are involved in 23% of Columbia's crashes [16]. People walking or biking are involved in only 3% of crashes in Columbia, but account for 25% of fatalities [16]. And, of Columbia's pedestrian injuries, 20% are children [16].

In light of the data on Columbia's serious injury and fatality crashes, particularly those of pedestrians and other minority and marginalized groups, components of a responsive Vision Zero strategy should include:

- Creation of a Vision Zero Task Force, website and educational campaign
- Collaboration with the Missouri Department of Transportation (MoDOT) to develop a Vision Zero partnership between the City and state on MoDOT roads within Columbia city limits
- Reducing speed limits, particularly on high-risk streets
- Using automated enforcement, especially near schools, underserved communities and areas of vulnerable road users
- Creating a crash review panel to review all fatal and serious injury crashes and make crash prevention recommendations
- Implement data-driven pedestrian safety improvements, such as leading pedestrian intervals, protected turn phases and no right turns on red
- Prioritizing road infrastructure improvements based on crash data, such as installing sidewalks along higher-speed roads

If Vision Zero is to be successful in Columbia, the adoption of the policy, and the development and implementation of the strategy should follow the model of other early-adopter Vision Zero cities.

These are summarized by the Vision Zero Network in the *9 Components of a Strong Vision Zero Commitment*:

1. Political Commitment: leadership by the highest-ranking local officials, including the Mayor, City Council and City Manager
2. Multi-Disciplinary Leadership: creation of a Vision Zero Task Force composed of representatives from multiple City departments
3. Action Plan: Vision Zero strategy created within 1 year of commitment
4. Equity: commitment to an inclusive public process and safe transportation for all road users in all areas of the city
5. Cooperation & Collaboration: partnership between governmental agencies and community stakeholders
6. Systems-Based Approach: focusing on strategies that will change the transportation system to influence behavior
7. Data-Driven: prioritizing resources based on evidence of greatest needs and impact
8. Community Engagement: creating opportunities for meaningful public involvement and input
9. Transparency: regular updates on progress on the strategy and performance measures

9 Components of a Strong Vision Zero Commitment

Based on the experiences of early-adopter cities in the United States, these nine components have proven to be an effective high-level framework for communities considering a Vision Zero commitment. While these are not the only factors to consider, they are critical aspects to ensure a strong and lasting commitment to Vision Zero.

POLITICAL COMMITMENT

The highest-ranking local officials (Mayor, City Council, City Manager) make an official and public commitment to a Vision Zero goal to achieve zero traffic fatalities and severe injuries among all road users (including people walking, biking, using transit, and driving) within a set timeframe. This should include passage of a local policy laying out goals, timeline, stakeholders, and a commitment to community engagement, transparency, & equitable outcomes.



MULTI-DISCIPLINARY LEADERSHIP

An official city Vision Zero Taskforce (or Leadership Committee) is created and charged with leading the planning effort for Vision Zero. The Taskforce should include, at a minimum, high-ranking representatives from the Office of the Mayor, Police, Transportation (or equivalent), and Public Health. Other departments to involve include Planning, Fire, Emergency Services, Public Works, District Attorney, Office of Senior Services, Disability, and the School District.



ACTION PLAN

Vision Zero Action Plan (or Strategy) is created within 1 year of initial commitment and is implemented with clear strategies, owners of each strategy, interim targets, timelines, & performance measures.



EQUITY

City stakeholders commit to both an equitable approach to Vision Zero by establishing inclusive and representative processes, as well as equitable outcomes by ensuring measurable benchmarks to provide safe transportation options for all road users in all parts of the city.



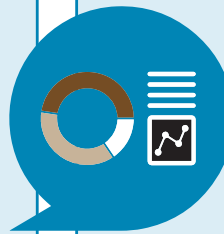
COOPERATION & COLLABORATION

A commitment is made to encourage meaningful cooperation and collaboration among relevant governmental agencies & community stakeholders to establish a framework for multiple stakeholders to set shared goals and focus on coordination and accountability.



SYSTEMS-BASED APPROACH

City leaders commit to and prioritize a systems-based approach to Vision Zero — focusing on the built environment, systems, and policies that influence behavior — as well as adopting messaging that emphasizes that these traffic losses are preventable.



DATA-DRIVEN

City stakeholders commit to gather, analyze, utilize, and share reliable data to understand traffic safety issues and prioritize resources based on evidence of the greatest needs and impact.

COMMUNITY ENGAGEMENT

Opportunities are created to invite meaningful community engagement, such as select community representation on the Taskforce, broader community input through public meetings or workshops, online surveys, and other feedback opportunities.



TRANSPARENCY

The city's process is transparent to city stakeholders and the community, including regular updates on the progress on the Action Plan and performance measures, and a yearly report (at minimum) to the local governing board (e.g., City Council).



For more visit the Vision Zero Network at visionzeronetwork.org.
Questions or ideas? Contact leah@visionzeronetwork.org.

VISION ZERO NETWORK

Chapter 4: Development of Recommendations

Section 4-1: Introduction

This chapter describes the work carried out by the three subcommittees of the Task Force during the middle phase of the project.

For the three meetings in November and December, 2015 and January, 2016, the subcommittees met independently in separate rooms for the first 60 minutes, and then reconvened as the full Task Force for the final 30 minutes of each meeting. During those meetings, each subcommittee (Education, Enforcement, and Engineering) was tasked to develop "Points of Consensus," a summary of "Current Conditions" in their specific area, and a list of proposed "Recommendations."

Section 4-2: Task Force "Points of Consensus"

Each of the three subcommittees developed "Points of Consensus." These were specific findings that all members of the subcommittee believe to be true and relevant to the Task Force's work of identifying recommendations for improving pedestrian safety in Columbia. The individual subcommittee findings were combined to develop the following fifteen Points of Consensus, on which all members of the Task Force agree:

1. Driver and pedestrian inattention, distraction, and impairment contribute to crashes.
2. Drivers and pedestrians do not always show empathy and respect for each other.
3. Children, senior citizens, and people with disabilities are at especially high risk in crashes.
4. In Columbia, college students make up a disproportionately high number of pedestrian crash victims.
5. People often exhibit an unwillingness to follow, or a poor understanding of, the rules of the road.
6. Education programs should target drivers and pedestrians, but enforcement activities should focus on drivers because they bear a greater burden of responsibility for safety.
7. New roadway designs and technologies are often confusing for drivers and pedestrians.
8. There is a general lack of sustainable funding for traffic safety education programs.
9. Education, enforcement, and engineering solutions support each other as part of a comprehensive traffic safety program.
10. Roadway design and engineering should encourage safe behavior, reduce the likelihood of drivers and pedestrians making mistakes, and limit the severity of crashes.
11. Specifically, roadway design and engineering should reduce the tendency of drivers to drive at unsafe speeds.
12. Speed is a major contributing factor to the incidence and severity of crashes involving pedestrians.
13. Eliminating CPD's Traffic Unit limits law enforcement's ability to control speeding and red light violations.
14. Relevant information from law enforcement investigations and studies does not always reach traffic engineers.
15. Many crashes involving pedestrians occur at intersections.

Section 4-3: Education Subcommittee Report

Current Conditions:

There are currently no regular, ongoing educational programs in Columbia specifically directed at pedestrian safety. In addition, no one agency has responsibility for this activity. Several groups do provide educational information and programs upon request, or as part of events, such as Bike, Walk and Wheel Week.

The PedNet Coalition offers several programs including Safe Routes to School workshops and has, in the past, provided regular programs at Columbia's elementary schools. GetAbout Columbia (a program of the City's Parks and Recreation Department) sponsors Bike, Walk and Wheel Week in May, and partners with other City departments and outside agencies to provide educational assistance to make non-motorized travel safer throughout the year. This includes working with groups such as Mizzou International and Off-Campus Students. Safe Kids Columbia promotes pedestrian safety as part of its mission with its Walk This Way program. It also provides educational materials on pedestrian safety for parents and teachers. The Missouri Department of Transportation sponsors the Arrive Alive campaign, which includes public information on pedestrian and bicycle safety as well as campaigns against distracted and inattentive driving.

New drivers in Missouri are required to pass a written test based on the Drivers Guide. This book contains just four pages of information for drivers regarding pedestrian and bicycle safety. Routine license renewal does not require retaking the written test but does require knowledge of roadway signage. Currently there is no formal mechanism to educate existing drivers on how to safely use new roadway infrastructure or to provide refresher education about sharing the roadways with pedestrians.

Summary of Subcommittee Meetings

The Education subcommittee, which met three times, consisted of a diverse group of Task Force members, guest participants, and City staff:

- Michael Szewczyk (co-chair, Boone Hospital Center)
- Leeann Johnson (co-chair, Frank L. Mitchell, Jr., MD Trauma Center)
- Katie Essing (member, The District)
- Dawn Zeterberg (member, Disabilities Commission)
- Marin Blevins (member, Parks and Recreation Commission)
- Katherine Lee (guest member, Public Transportation Advisory Commission)
- Annette Triplett (guest member, PedNet Coalition)
- Joseph Sell (guest member, Missouri Students Association)
- Clyde Ruffin (Task Force co-chair, City Council)
- Janet Godon (City staff support, Parks and Recreation Department)

At its first meeting the subcommittee reviewed the information regarding pedestrian injuries and fatalities provided to the Mayor's Task Force on Pedestrian Safety during the preceding meetings. Emphasis was placed on a review of the pedestrian/motor vehicle crash reports including maps of locations of serious and fatal crashes over the last 3 years. Also reviewed were the various efforts being made by different entities to eliminate or reduce the severity of these occurrences.

While it was clear from these discussions that education was a very important component in helping eliminate pedestrian injuries, it was also clear that limited resources, an absence of any centralized oversight of programs, and a lack of funding were barriers to a comprehensive educational program.

Understanding these limitations, there was discussion on who should be the target population for an education campaign. It was agreed that, prior to the next meeting, subcommittee members would do further research regarding existing and recommended educational outreach programs. This would include those identified by the National Highway Traffic Safety Administration as well as the efforts being made by currently established Vision Zero programs in New York, Seattle and San Francisco.

At the second subcommittee meeting, it was agreed that the two target populations were:

1. Automobile drivers;
2. Students (K-12 and college).

It was also agreed that there were three main causes of those specific pedestrian crashes that could be prevented or mitigated through educational programs:

1. Inattention and distraction
2. A lack of empathy and respect for other road users
3. Failure to understand or follow the rules of the road

Multiple suggestions for educational outreach were offered by subcommittee members. Again, recognizing a lack of resources, the group was unanimous in recommending that the City of Columbia adopt a Vision Zero Policy to serve as a framework for pedestrian safety initiatives including educational programs.

Funding options were discussed. There was general agreement that traffic safety education is an essential component of roadway safety that is often overlooked due to budget constraints. With that in mind, the idea of a "One Percent for Safety Education" program, in which 1% of the budget for every road project would be set aside for traffic safety education, was proposed. This idea was immediately and unanimously embraced by the entire subcommittee and adopted as one of its overarching recommendations.

At the third and final subcommittee meeting, members reviewed prior discussions and refined their determinations and recommendations. Consensus was reached on 15 recommendations to submit to the full Task Force. The relative priority and feasibility of each recommendation was indicated by identifying:

- How quickly the recommendation should be implemented (2016, 2017, etc.);
- How much it would cost to implement the recommendation ("Low," "Medium" or "High")

The subcommittee also felt that "before and after" data should be obtained when implementing specific programs to determine their effectiveness and guide future educational activities.

Finally, it was agreed that the issue of pedestrian safety needs strong "Champions," a role that the Mayor and City Council should fill.

Recommendations

1. Adopt a "Vision Zero" Policy (2016, Med-High)
2. Develop a comprehensive Road Map to Traffic Safety and incorporate a strong social media presence to reach a diverse population and multiple age groups (2016, Low)
3. Develop our own safety logo designed to instill a message of empathy and respect for all road users with an end goal of behavior change - this logo could be placed at high traffic areas or where drivers and pedestrians have been injured (2017, Low)
4. Utilize local celebrities to promote pedestrian safety (2017, Low)
5. City should adopt "One Percent for Safety Education" where 1% of road project funding would be used for safety education within the Vision Zero program (2016, Med)
6. Establish evidence based new driver training courses to be offered through the Career Center with the cost covered by course fees (2017, Low)
7. Partner with business community such as car dealerships or insurance companies to sponsor traffic safety initiatives and educational outreach programs (2017, Low)
8. Identify and promote Traffic Safety Ambassadors within businesses and organizations, both in town and on campus (2017, Low)
9. Encourage the University, local colleges and high schools to require an online traffic safety training module for students obtaining parking permits - include special modules for international students utilizing native languages as needed (2017, Low)
10. Encourage and assist Columbia Public Schools in providing age appropriate pedestrian and driver educational information/reminders to all students, K - 12 (2017, Low)
11. Use roadside reader boards to educate drivers and pedestrians on how to use new roadway infrastructure - consider targeted messages (possibly involve CVB) during high traffic visitor weekends (2016, Med)
12. Work with campus International Student groups to provide pedestrian and driver traffic safety training (2017, Low)
13. Use the City's utility bill for targeted information on new or confusing roadway infrastructure or other identified problem areas (2016, Low)
14. Lobby for "Hands Free Driving" ordinance (2016, Low)
15. Develop a public information campaign on pedestrian rights & responsibilities (2017, Med)

Section 4.4: Enforcement Subcommittee Report

Current Conditions:

Current conditions with respect to speed limits, automated enforcement, and cellphone use were researched.

Current speed limits in Columbia are as follows:

- 60 - 65 mph on Freeways
- 45 - 55 mph on Expressways
- 30 - 55 mph on Major Arterials
- 30 - 35 mph on Collectors
- 25 mph on Residential streets
- 20 mph on Downtown streets
- 20 mph in school zones

While speed limits can be an effective tool to improve the safety of pedestrians, these rules must be enforced by Police Officers or through automated enforcement. The City of Columbia does not currently have a "speed camera ordinance," but this could be a recommendation for City Council. State law currently prohibits prosecution of traffic offences using cameras that capture the vehicle license plate and serving a citation to the registered owner of the vehicle. However, an automated enforcement system in which speed violators were photographed and the driver identified through facial recognition would be legal.

Red-light cameras can also improve pedestrian safety, by ticketing drivers who violate red lights, potentially putting pedestrians at risk. As with speed cameras, red-light cameras are allowed under State law if they employ a process of facial recognition. Although the City of Columbia has a red-light camera ordinance on the books, there is strong community opposition to this law, and City Council recently voted not to enforce it. However, this decision could be re-visited in conjunction with appropriate education and advocacy efforts.

Another strategy that might have a large impact on pedestrian safety at low cost would be to prohibit cellphone use while operating a motor vehicle. Current State law prohibits "texting while driving" for persons under the age of 21 and, as of March, 2016, there are several bills under consideration by the Missouri General Assembly to broaden these restrictions to include all drivers, and some apply to all forms of cellphone use. On March 15th, the Task Force sent a letter to members of the Missouri General Assembly (see Appendix F) providing input on these bills. The City of Columbia currently has no ordinances related to cellphone use while driving.

During the time (November, 2015 - January, 2016) the Enforcement Subcommittee was in the process of developing its recommendations, the Columbia Police Department eliminated its Traffic Enforcement Unit, as part of its response to a long-term challenge of inadequate resources. With this in mind, the Enforcement Subcommittee felt that its number one proposed strategy should be to increase funding for more police officers and re-instate the Traffic Enforcement Unit.

Summary of Subcommittee Meetings

The Enforcement Subcommittee consisted of the following Task Force members, guest participants, and City staff:

- Nate Brown (co-chair, community member)
- Lawrence Simonson (co-chair, PedNet Coalition)
- John White (member, Columbia Public Schools)
- Frank Schmidt (member, University of Missouri)
- Tec Chapman (member, Services for Independent Living)
- Ann Marie Gortmaker (guest member, Services for Independent Living)
- Ian Thomas (Task Force co-chair, City Council)
- Lieutenant Krista Shouse-Jones (City staff support, Columbia Police Department)
- Sergeant Curtis Perkins (City staff support, Columbia Police Department)

The Enforcement Subcommittee met three times. During the first meeting, subcommittee members introduced themselves, discussed why pedestrian safety is important to them, and talked about how they think enforcement relates to pedestrian safety. Members agreed that they should use the framework of a Vision Zero Policy improve pedestrian safety through enforcement.

For the second meeting, subcommittee members were asked to review other Vision Zero Enforcement policies/strategies and bring 2-5 strategies they would like to see implemented to improve pedestrian safety in Columbia. After everyone described their strategies and why they support them, a comprehensive list of fourteen Enforcement policies/strategies was compiled.

At the third meeting, subcommittee members were asked to review the comprehensive list, identify their top two Enforcement strategy recommendations and speak about why they chose those two. Following this discussion, each subcommittee member prioritized the strategies on a voting form. These individual inputs were combined to develop the subcommittee's ranked recommendations.

For each recommendation, the Enforcement Subcommittee also identified:

- How quickly the recommendation should be implemented (2016, 2017, etc.);
- How much it would cost to implement the recommendation ("Low," "Medium" or "High")
- Who would be responsible for implementation (Council, Columbia Public Works or CPW, Columbia Police Department or CPD, etc.)

Ranked Recommendations:

1. Increase funding for more police officers (2017, High, Council/voters)
2. Reduce speed limits - speed limit of 20 mph unless it's an arterial road, which would be 30 mph; major roads would be 40; reduce speed in densely populated areas (2016, Low, Council/CPW/MoDOT)
3. Prohibit cellphone use (including texting) while driving (Council, 2016, Low, Council/CPW/MoDOT,)
4. Install speed and/or red-light cameras (2017, Med-High, Council/CPW/CPD)
5. Provide ongoing, high-visibility enforcement (2017, Medium, CPD)
6. Adopt new technology to help officers work smarter not harder (2017, Medium, CPD)
7. Implement driver/pedestrian ticket diversion program (2017, Low, Boone County Prosecutor)
8. Install traffic calming on certain streets (2017, Low-Medium, Council/CPW)
9. Increase in courtesy enforcement - violators would receive a gift card or warning instead of a penalty during a predetermined grace period while new laws are rolled out (2016, Low, CPD)
10. Determine speed limit by pedestrian accommodation - lower speed limit if the area is unsafe for pedestrians (2017, Low, Council/CPW/MoDOT)
11. Offer pedestrian safety class to help increase pedestrian compliance of rules of the road - also need education component for children (2017, Low, GetAbout Columbia/Columbia Public Schools)
12. Better coordination and exchange of information between CPD, Boone County Sherriff's Department, and University of Missouri Police Department (2016, Low, CPD/BCSD/MUPD)
13. Consider pedestrian safety at building and construction sites - examples include Shakespeare's site at Elm and Ninth Streets and balconies directly over sidewalks at downtown apartments near campus (2017, Low, Planning and Zoning Commission)
14. Offer bike training/education for law enforcement officers (2017, Low, PedNet/CPD)

Section 4.5: Engineering Subcommittee Report

Current Conditions

Currently, Columbia's pedestrian facilities are overseen by MoDOT, Columbia Public Works, Columbia Water and Light, and the University of Missouri. Each entity plays a unique role, from developing planning strategies for improving/installing sidewalks to overseeing street lighting on city roads.

Public Works' Neighborhood Traffic Management Program (1) addresses neighborhood traffic concerns with measures to increase safety, and manage traffic speed and volume. Public Works engineers will also perform road safety audits as required, which are comprehensive evaluations of a targeted segment of road.

Columbia has a Complete Streets policy (2 and 3) for construction of pedestrian facilities with new road construction or other significant street improvements. The Departments of Public Works and Community Development plan for sidewalk infill where there currently none, and Public Works and MoDOT upgrade existing sidewalk and ramps to meet ADA requirements.

Summary of Subcommittee Meetings

The Engineering Subcommittee consisted of the following Task Force members, guest participants, and City staff:

- Rachel Ruhlen (co-chair, Bicycle and Pedestrian Commission)
- Steven Hanson (co-chair, Public Transportation Advisory Commission)
- James Beattie (member, Missouri Department of Transportation)
- Amy Wasowicz (member, Missouri Students Association)
- Kyle Riley (member, Phoenix Programs)
- Carrie Gartner (guest member, Business Loop CID)
- Joe Alder (guest member, Columbians for Pedestrian Quality Experience)
- Mitch Skov (City staff support, Community Development)
- Richard Stone (City staff support, Columbia Public Works)

Engineering is one of the three most important factors (with education and enforcement) in pedestrian safety. The design of a road dictates the safe speed and influences the traffic speed, but the two are not always the same.

During four meetings, the Engineering Subcommittee reviewed New York's Vision Zero plan and several Pedestrian Safety Webinars from the Pedestrian and Bicycle Information Center. Members studied the City of Columbia's Neighborhood Traffic Management Program and Traffic Calming Guidebook and discussed with City staff how the program works and how it could be expanded and modified to include collector and arterial roads.

The subcommittee specifically considered recent pedestrian fatalities and what design changes would reduce future injuries and fatalities.

Recommendations

1. Identify what engineering design aspects, if any, contributed to the deaths at South Providence and Carter Lane, Stadium Drive at West Worley, and Rangeline Rd. (CPW, 2017)
 - a. Define the ideal solution for each of these, as well as for the intersection of Rollins Street and College Avenue, a site of numerous collisions leading to significant, permanent injuries
 - b. Determine what characteristics of these locations that make them dangerous apply to other locations
2. Conduct routine Road Safety Audits and Assessments (CPW/BPC/PTAC/DC/MoDOT/independent agency/community orgs, 2016 and ongoing)
 - a. Using community input and crash data to prioritize assessments & audits - enable neighborhood associations, schools, communities to conduct assessments by providing a Walkability Checklist
 - b. Determine a reasonable # of roads to assess and audit annually
 - c. Develop guidance for traffic management specific to collectors, arterials, and major roads, similar to the existing Neighborhood Traffic Management Program for residential streets.
 - d. Assessments and audits should:
 - i. Routinely assess pedestrian-specific needs such as accessibility, lighting, sidewalk, crosswalks, and signals (assess ADA compliance and Universal Design; assess frequency of crosswalks and pavement condition of crosswalks and sidewalks - Providence and Bus Loop are examples of roads that have long distances between crosswalks; use the criteria currently being developed by Public Works)
 - ii. Examine speed limits and the speed-design of the road
 - iii. Include intersections.
3. Appoint a Safety Engineer(s) to investigate crashes and review plans (CPW/CPD, 2016-17)
- the Safety Engineer will:
 - a. Establish liaisons within Public Works and the Police Dept to facilitate getting crash data to Public Works
 - b. Investigate crashes to seek safety improvements, prioritizing:
 - i. Pedestrian-vehicle crashes, and
 - ii. Crashes of any modes resulting in serious injury or fatality - serious injury and fatality crashes shall be reviewed and a report submitted to Council annually.
 - c. Conduct a safety, accessibility, and connectivity review of engineering plans for streets, focusing on intersections, sidewalks, pedestrian trails and crosswalks, and bus stops
4. Implement automated enforcement, such as red light cameras and/or speed cameras (Council/CPD, 2018-19)
 - a. Target school zones and problem intersections
 - b. Establish a fund for revenue to benefit victims of traffic crashes, enhance safety, or enhance schools

5. Change standards to promote safety (CPW/BPC/PTAC/DC, 2019-2021)
 - a. Improve standards for intersections in Complete Streets as recommended by the Bicycle & Pedestrian Commission
 - b. Develop criteria for adequate pedestrian-street interactions, to address:
 - i. lighting at crosswalks and arterial bus stops
 - ii. crosswalks, including marking, signage, signals, paving materials, surface performance, etc
 - iii. distance pedestrians must travel to cross, and pedestrian refuges where appropriate
 - iv. prioritization of updates and repairs
 - c. Research and implement best practices and innovations from other cities and the latest technologies, and develop and test our own innovations

6. Market the innovations and improvements of Public Works so that community support remains strong (CPW, 2016)

Section 4.6: Next Steps

After the individual subcommittees completed their work and delivered "Points of Consensus," summaries of "Current Conditions" and proposed "Recommendations" to the full Task Force, the next step was to combine all of this input into a single coherent Report and Recommendations.

Chapter 5: Recommended Strategies

Section 5-1: Introduction

In this chapter, sixteen specific recommendations for City Council action are presented.

Section 5-2, is a discussion of budget considerations. Since neither a funding allocation nor any budget guidelines accompanied the City Council Resolution establishing the Task Force, members were unsure what type of recommendations to make. A discussion of this issue that extended across two consecutive Task Force meetings identified several potential sources of revenue and developed a philosophy under which the Task Force would propose a range of recommendations, some of which would cost very little to implement, and others that would cost more.

The sixteen recommendations are presented in Section 5-3 and discussed in detail in Section 5-4. The first recommendation - to adopt a Vision Zero Policy - is over-arching and creates the framework for the other fifteen, which are organized according to the "Three Es" - Education, Enforcement, and Engineering. The first Education-related recommendation is to adopt a "One-Percent for Safety Education" policy, which would create a funding stream for all other educational activities. The first Enforcement-related recommendation is to increase funding for police traffic safety enforcement, which will depend on the currently evolving political consensus on the need to expand police staffing actually leading to new CPD funding. A recommended new position of Traffic Safety Engineer/Crash Analyst would be established under new police funding and would be responsible for most of the Enforcement and Engineering-related recommendations.

Finally, Section 5-5 lays out an evaluation plan for the implementation of these recommendations and a system for tracking progress and success.

Section 5-2: Budget Considerations

During the first hour of the November 17th, 2015 meeting, the three subcommittees held separate meetings to discuss specific strategies for increasing pedestrian safety in the areas of education, enforcement, and engineering. When the entire group reconvened, Education Subcommittee co-chair Michael Szewczyk asked, "What is the implementation budget for the Task Force's recommendations?" He also pointed out that it is difficult to craft a meaningful plan and set of recommendations without knowing the available budget for implementation.

During discussion of this question, it was agreed that no identified budget for implementing the Task Force's recommendations exists. While the Task Force was formed by City Council Resolution in May, no corresponding line item was created in the City Budget. However, as co-chair Ian Thomas pointed out in a later memo, budgets are financial planning documents and, just as plans change, budgets can change, too! Specifically, the City Council approves a new City Budget every year in September, which is broadly similar to the previous year's budget, but has a large number of specific changes and new initiatives (each of which is usually small in dollar terms relative to the entire budget). So, it will be within the Council's purview in September, 2016, to allocate funds for pedestrian safety implementation strategies as recommended by the Task Force.

Having said that, the City Council will either have to find new funds or re-allocate existing funds away from another purpose, since there is currently no dedicated funding for pedestrian safety. While it is not realistic to anticipate any new local funding sources in the short term, federal grants may be available because of national interest in increasing pedestrian safety and access.

The need to identify funding for traffic safety education was seen as particularly important, and it was felt that the City should also study its existing transportation expenditures and question the benefit and necessity of both the size and the scope of some of these projects. Every year, millions of public dollars are spent to expand existing streets to accommodate more cars and more driving (such as the \$13 million project to widen one mile of Forum Boulevard). Each of these roadway projects should be examined to determine its impact on pedestrian safety and access, with attention paid to whether or not it creates a safer, healthier, more sustainable, more equitable, and better functioning overall transportation system in Columbia. The Task Force also believes that a small portion of the budgets of roadway projects should be allocated to traffic safety education through a "One Percent for Safety Education" program.

It was agreed by the Task Force that a range of strategies is available, some of which would cost more than others, with some costing nothing at all. For example, it would cost nothing for the City Council to adopt a Vision Zero Policy, which asserts that safety is the most important factor in transportation decision-making, that traffic deaths and serious injuries are preventable and unacceptable, and that the transportation system should be designed so that user errors are not fatal. While a statement like this would not directly impact pedestrian or driver behavior, it would demonstrate a political commitment to traffic safety and create impetus for actual program, policy, and physical changes, which would require implementation funds. Other "no-cost" strategies could include reducing speed limits, increasing fines for distracted driving, offering safety education "diversion classes" for offenders, and passing a "complete intersections" policy.

Many educational approaches could be considered to be "low-cost" strategies. While it would take staff time to create a public information campaign about "Pedestrian Rights and Responsibilities" or "No Texting While Driving," plus additional resources to print brochures, activate social media, and/or purchase TV and radio time, these strategies could be introduced at a low cost (20% FTE staff time and less than \$20,000 in purchased media, say) and expanded later. Some enforcement and engineering strategies may be "low-cost," such as increasing enforcement at the same time as increasing penalties for violations, and adding "rumble strips" to selected highways.

Most engineering solutions would be "high-cost" strategies. Improving the lighting at crosswalks, re-engineering streets to achieve safe design speeds, and adding traffic calming (roundabouts, speed tables, bulb-outs, etc.) are expensive in staff/contractor design and construction costs, as well as materials. Combined policy/engineering strategies such as prohibiting "Right Turn on Red" at intersections and reconfiguring traffic signals to provide a "Pedestrian Lead Interval" would require some design and construction - these might be considered "medium/high-cost" strategies.

At the end of this discussion, which spanned two Task Force meetings, it was agreed that a range of strategies exists at a range of different price points, and that each Subcommittee could choose to develop a range of recommendations, starting with "no-cost" or "low-cost" steps that may have a small impact and increasing to higher-impact, "high-cost" strategies.

Section 5-3: Recommendations for City Council Action

After the three subcommittees completed their work, the entire Task Force reconvened and reviewed the combined list of approximately thirty-five recommendations, many of them with multiple sub-recommendations.

Over the following several meetings, the Task Force worked through an iterative process of refining, combining, reorganizing, and "word-smithing" the recommended strategies. This consensus-building process was facilitated by the Task Force co-chairs in a way that ensured everyone's voice was heard, all suggestions received a fair hearing from the entire Task Force, and input that was favorably received by the majority of members was incorporated. If any member opposed a particular idea, there was further discussion to amend the idea until it was acceptable to everyone. Eventually, the group arrived at a list of sixteen recommendations, on which everyone was agreed.

At the March 17th, 2016 meeting, the Task Force unanimously approved the following list of sixteen recommendations for City Council action:

Vision Zero:

1. Adopt a "Vision Zero" policy

Education:

2. Adopt a "One Percent for Safety Education" policy
3. Develop a comprehensive traffic safety education and communication campaign
4. Work with other organizations to develop education campaigns and policies
5. Promote all traffic safety innovations and improvements

Enforcement:

6. Increase funding for police traffic safety enforcement
7. Prohibit cellphone use and texting while driving
8. Reduce legal, posted speed limits
9. Improve and reform enforcement of speed limits and prosecution of violators
10. Specifically, utilize automated enforcement such as red light cameras and speed cameras
11. Improve coordination and data-sharing among law enforcement, other agencies, and the public
12. Provide routine bicycle and pedestrian safety training for law enforcement officers

Engineering:

13. Start a new program of Road Safety Audits and Assessments
14. Create a new position of Traffic Safety Engineer/Crash Analyst
15. Identify engineering design parameters that contribute to pedestrian deaths and injuries
16. Improve and reform road design and engineering standards to increase safety

A diagrammatic representation of these recommendations is included on the inside cover of this report. It illustrates graphically that the first and most important recommendation is to adopt a Vision Zero Policy, and that the more specific education, enforcement, and engineering-related recommendations are components of the Vision Zero Implementation Strategy or Program.

Section 5-4: Discussion of Recommendations

Recommendation 1: Adopt a "Vision Zero" policy (FY16)

The Task Force recommends the City Council adopt a "Vision Zero" policy.

As was discussed in Chapter 3, Vision Zero is a philosophy for transportation system design and operation which asserts:

1. Safety is the most important factor in transportation planning;
2. Traffic deaths and serious injuries are preventable and, therefore, unacceptable;
3. Transportation systems should be designed so that user errors are not fatal.

Adopting a Vision Zero policy should be the City Council's first legislative action following acceptance of this report and should be completed during Fiscal Year, 2016 (FY16). It may be accomplished by adopting a Policy Resolution that asserts the three statements given above and lays out a plan for implementation including a discussion of budgetary needs and funding options.

The Task Force recommends the Council establish a permanent Vision Zero Steering Committee, led by City staff, as other cities have done. The Steering Committee should include representation from Public Works, Columbia Police Department, Parks and Recreation, and Health, as well as relevant Advisory Boards and Commissions (Bicycle/Pedestrian, Public Transit, Disabilities, etc.) and community stakeholders (PedNet Coalition, Columbia Public Schools, University of Missouri, Missouri Students Association, MoDOT, etc.).

The Steering Committee should solicit input from the public and then develop an implementable, multi-year Vision Zero Strategy based on the following fifteen Task Force recommendations.

Recommendation 2: Adopt a "One Percent for Safety Education" policy (FY17)

The first two Points of Consensus identified by the Education Subcommittee were (A) that there are no ongoing educational programs in Columbia specifically directed at pedestrian safety, and (B) that there is a general lack of sustainable funding for traffic safety education.

This is an extremely serious deficiency in the context of a Vision Zero policy, which is based on the transportation system philosophy that:

1. Safety is the most important factor in transportation planning;
2. Traffic deaths and serious injuries are preventable and, therefore, unacceptable;
3. Transportation systems should be designed so that user errors are not fatal.

The Education Subcommittee and the entire Pedestrian Safety Task Force believe identifying and allocating funding for traffic safety education is an essential first step in reducing and eventually eliminating pedestrian, bicyclist, and motorist deaths and serious injuries on Columbia's roads.

The Task Force recommends the City Council adopt a "One Percent for Safety Education" policy, which would require that 1% of all expenditures on major roadway projects be placed in a dedicated fund to be used only for traffic safety education. In this way, a roadway improvement project, such as the proposed \$13 million widening of Forum Boulevard would generate \$130,000.

Based on annual expenditures of \$8 - \$10 million on major roadway projects, the Task Force estimates that this program would generate \$80,000 - \$100,000 per year - sufficient to hire one part-time or full-time staff member and cover the printing, broadcasting, and social media costs of a comprehensive traffic safety and education campaign.

This recommendation should be implemented during Fiscal Year, 2017 (FY17).

Recommendation 3: Develop a comprehensive traffic safety education and communication campaign (start in FY17)

The Task Force recommends the City develop a comprehensive and ongoing Traffic Safety Education and Communication Campaign. Consistent with the Vision Zero philosophy, this education campaign would focus on reducing injuries and saving the lives of pedestrians, bicyclists, transit users, motorists, and all other road users. The staff time and other expenses of this program would be funded with the proceeds generated by the "One Percent for Safety Education" program.

Numerous suggestions for specific components of this campaign were put forward by the Task Force:

- Develop a public information campaign on pedestrian rights and responsibilities;
- Utilize local celebrities to promote pedestrian safety in print, radio, and TV materials;
- Appoint and support volunteer Traffic Safety Ambassadors within businesses and organizations, both in the community and on campus;
- Develop a traffic safety logo designed to instill a message of empathy and respect for all road users with an end goal of behavior change;
- Use the logo on all materials and place it on high-visibility signs in heavy traffic areas and at locations where drivers and pedestrians have been injured and killed;
- Use roadside reader boards to educate drivers and pedestrians on how to use new roadway designs, infrastructure, and technologies;
- Use the City Source newsletter (mailed with monthly utility bills) for targeted information about new or confusing roadway designs or other identified problem areas;
- Develop targeted messages (involve the Columbia Convention and Visitors' Bureau) during events that attract visitors from out of town;
- Incorporate a strong social media presence into all communications to reach a diverse population and multiple age groups;
- Invite car dealerships, insurance companies, and other business partners to sponsor some traffic safety initiatives and educational outreach programs.

This would be a highly flexible program that could reside in the Public Works Department, or in the Parks and Recreation Department as an expansion of the existing GetAbout Columbia program.

Recommendation 4: Work with other organizations to develop education campaigns and policies (start in FY17)

In addition to developing its own education and communication campaign, the City of Columbia must work with other institutions in the community to promote pedestrian safety and Vision Zero.

Columbia Public Schools, the University of Missouri, Missouri Students Association, Columbia and Stephens Colleges, the Chamber of Commerce, and Boone County each has its own constituency, communications network, and interaction with the issue of pedestrian safety. Through funding from the "One Percent for Safety Education" program, each of these partners should be engaged in the importance of pedestrian safety and the philosophy of Vision Zero.

Here are some specific suggestions for partnership activities:

- Work with Columbia Public Schools to implement an age-appropriate pedestrian safety education program (possibly build this into existing "Walking School Bus" efforts);
- Combine pedestrian safety for elementary schoolchildren, bicycle and transit training for middle-schoolers, and driver education (including partnering with ThinkFirst Missouri) for high school students in a comprehensive "mobility education approach."
- Work with the Columbia Area Career Center to re-establish and promote at high schools an evidence-based driver safety training course with program costs covered by course fees.
- Work with the University of Missouri, Stephens and Columbia Colleges, and high schools to require an online traffic safety training module be completed by all students applying for parking permits.
- Work with the University of Missouri's International Center to provide foreign students with culturally appropriate and language-accessible pedestrian and driver safety training.
- Work with the Chamber of Commerce to develop workplace driver safety programs.

Recommendation 5: Promote all traffic safety innovations and improvements (start in FY17)

The final Task Force recommendation in the "Education" area is to promote all traffic safety innovations and improvements throughout the community.

In a general sense, this means the Traffic Safety Education and Communication Campaign Manager (funded from the "One Percent for Safety Education" program) would develop announcements, press releases, and articles in magazines, and reach out to radio and TV talk shows to educate the community about all new policies, regulations, and engineering projects related to traffic safety.

It would also include the creation and dissemination of detailed instructions about how to use specific traffic safety innovations. The Education Subcommittee came to the conclusion that ignorance and confusion about the correct way to use roundabouts, the meaning of a flashing yellow left-turn arrow at an intersection (versus a solid green), and whether motorists must come to a full stop or may proceed with caution under various configurations of a HAWK signal lead to uncertainty, unpredictable behavior by drivers and pedestrians, and a high risk of collisions.

The Task Force discussed the new HAWK ("High-Intensity Activated Crosswalk" signals on College Avenue at length. While members agreed the new arrangement was safer for pedestrians than previously, there was significant confusion about the specific meanings of flashing yellow, steady yellow, flashing red, and steady red lights, and a concern that there were no push-buttons in the center island for slower-moving pedestrians who might get stranded there.

The Task Force would like clear explanations and instructions for innovative traffic systems to be made easily available on-site (digital reader boards), on the Internet, and in printed materials.

Recommendation 6: Increase funding for police traffic safety enforcement (FY18)

The Enforcement Subcommittee quickly identified a lack of capacity in the Columbia Police Department (CPD) in general, and the Traffic Unit in particular, to enforce laws against speeding and other safety violations.

Shortly after the subcommittee discussed the shortage of staffing resources for effective enforcement, Police Chief Ken Burton announced that the Traffic Unit would be disbanded in order to respond to other, higher-priority demands on very limited police time. CPD will continue to have certified crash reconstructionists who investigate crashes involving serious injuries and fatalities.

The disbandment of the Traffic Unit emphasized a serious budget and staffing shortage within the Police Department that has been discussed for many years but never rectified. However, there currently appears to be an evolving political consensus on the need to expand police staffing as a top priority that may actually lead to new funding in the next 1-2 years.

With that possibility in mind, the Enforcement Subcommittee and the entire Task Force recommends an increase in funding for police traffic safety enforcement as a critical strategy in improving pedestrian safety through enforcement. This investment in traffic safety should be included in any planning for expanding funding for CPD - because this recommendation depends on uncertain political factors, the Task Force identifies FY18 for implementation.

Recommendation 7: Prohibit cellphone use and texting while driving (FY18)

"Distracted driving" (meaning the driver was not paying enough attention to the road to avoid a collision) was a probable factor in several of the pedestrian injuries and fatalities that occurred in Columbia in late 2014 and early 2015. One of the most common "distractions" for drivers is the tendency to use cellphones, including sending and reading text messages, while operating a moving vehicle.

With that in mind, the Mayor's Pedestrian Safety Task Force recommends the City of Columbia pass an ordinance to prohibit all cellphone use while driving which, it is believed, would have a large positive impact on pedestrian safety. While the City currently has no ordinances that relate specifically to cellphone use while driving, laws do exist that prohibit the unsafe driving behaviors that result from distracted driving. CPD staff point out that these dangerous behaviors are easily observable, and therefore easier to enforce than developing probable cause for a phone use violation. However, Task Force members feel that, without a specific ordinance prohibiting cellphone use, many drivers believe (mistakenly) that they are capable of driving safely while using a cellphone. An ordinance would also send a message that this behavior isn't culturally acceptable.

Current state law prohibits "texting while driving" for persons under the age of 21 and, as of March, 2016, there are several bills under consideration by the Missouri General Assembly to broaden these restrictions to include all drivers, and some apply to all forms of cellphone use. On March 15th, the Pedestrian Safety Task Force submitted a letter to members of the Missouri General Assembly (see Appendix F) providing input on these bills.

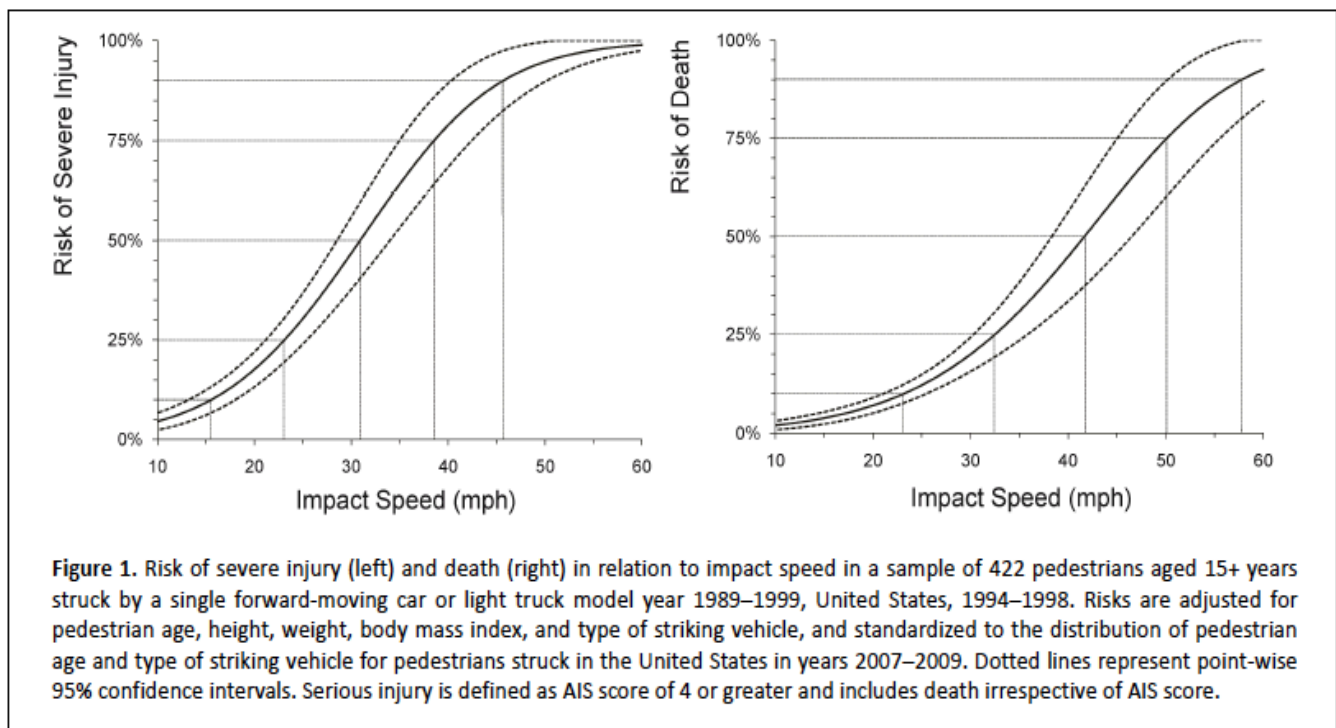
Unless the State of Missouri passes a law prohibiting cellphone use and texting while driving, the Task Force recommends the City pass such an ordinance. This would create an inconsistency with laws in surrounding Boone County and other areas, which may require specific posted signs at the entrance to City limits. It may also be politically unpopular, in which case, a possible first step would be to implement the law in school zones and on college campuses only, where there are large numbers of both vulnerable pedestrians and young, inexperienced drivers who are more likely to engage in distracted driving.

Another way to introduce the law incrementally might be to work with specific businesses that employ drivers to develop internal policies. The Task Force has been told that Columbia Housing Authority and Welcome Home, Inc. already enforce internal rules that prohibit text messaging, checking email, and talking on a cell phone while driving for work. The City should work with the Chamber of Commerce and other business organizations to expand policies like these.

Finally, the Task Force recognizes the valuable role played by national organizations such as the National Transportation Safety Board (NTSB) and the National Safety Council (NSC). Some members of the Task Force support the position held by NTSB and NSC that so-called "hands-free technology" does not reduce distraction or improve safety, and should also be prohibited.

Recommendation 8: Reduce legal, posted speed limits (FY18)

Numerous studies have shown [17] that the risk of a pedestrian being seriously injured or killed when hit by an vehicle approximately doubles when the vehicle's speed increases from 20 to 30 mph, and doubles again when it is further increased to 40 mph.



With this dramatic increase in morbidity and mortality with higher-speed collisions in mind, the Task Force recommends that City traffic engineers review the existing policies and procedures for setting speed limits in the context of a Vision Zero philosophy, which states that safety is the most important factor in transportation planning. This means that saving lives and minimizing injuries should be considered more important than maximizing "Level of Service" (LOS), which is a qualitative measure used to relate the quality of traffic service provided to motorists, pedestrians, wheelchair users, bicyclists, and transit riders, or should be included in the calculation of LOS.

According to James Beattie, a Senior Highway Designer with MoDOT and a Task Force member, setting speed limits is a multi-faceted process that takes multiple factors into account, including, but not limited to:

- Prevailing operating speed (85th Percentile Speed);
- Density of pedestrian traffic in the area;
- Documented fatality and disabling injury crash rate;
- Adjacent development and land uses
- On-street parking
- Engineering judgment

The Task Force favors a process in which safety considerations become the major contributing factor in determining a posted speed limit, and expressed a number of concerns with the current process for setting posted speed limits, specifically:

1. That posted speed limits are sometimes based solely on the prevailing operating speed (as quantified by the 85th percentile speed) rather than a desired "design speed."
2. That posted speed limits only address the LOS need for automobiles and no other users - LOS should be based on all users (motorists, pedestrians, wheelchair users, bicyclists, and transit riders) that use a given facility.
3. That posted speed limits on some city streets are higher than the desired "design speed" for those streets, meaning design parameters such as super-elevation (camber on a curve), and vertical and horizontal sight distance in the original design of the street may no longer be safe due to the increased speed.
4. That posted speed limits sometimes fail to reflect changes due to property development, increased density, more intensive land uses, increased pedestrian and bicyclist activity - in these cases, the existing posted speed limit should be re-evaluated and adjusted to ensure safety for all users.

A number of different traffic calming devices exist that can be incorporated on existing City streets that can help reduce operating speed and improve the overall safety of the transportation facility for all users. Bulb outs are one example of traffic calming devices that can help reduce operating speed and have the added advantage of placing pedestrians in a location at a crosswalk where they are more easily seen by drivers. The Task Force understands that not all calming devices work on all types of streets. However, these devices should be used where appropriate to ensure a safe and reasonable LOS of the city's transportation system for all users.

Current speed limits on different types of roadways in Columbia are as follows:

- 60 - 65 mph on Freeways
- 45 - 55 mph on Expressways
- 30 - 55 mph on Major Arterials
- 30 - 35 mph on Collectors
- 25 mph on Residential streets
- 20 mph on Downtown streets
- 20 mph in school zones

In summary, the Task Force recommends the City of Columbia review these speed limit ranges as well as the processes for determining them and for considering variances to these general rules, and then determine to what extent these speed limits and processes are consistent with a Vision Zero philosophy, in which:

1. Safety is the most important factor in transportation planning;
2. Traffic deaths and serious injuries are preventable and, therefore, unacceptable;
3. Transportation systems should be designed so that user errors are not fatal.

On the basis of this determination, the Task Force recommends the City revise these processes and reduce the legal, posted speed limits where applicable, while taking into account the need to enforce new laws.

Recommendation 9: Improve and reform enforcement of speed limits and prosecution of violators (start in FY17)

The Task Force recommends the Columbia Police Department and Municipal Prosecutor's Office explores and implements/expands various innovative strategies for enforcing speed limits and rehabilitating offenders.

Specific initiatives should include:

- Use of new technology;
- High-visibility enforcement;
- Courtesy enforcement;
- Diversion programs.

New technology exists to help officers work smarter, not harder. Since CPD has limited capacity for traffic speed enforcement, tools that increase officer efficiency should be explored and adopted when appropriate. For example, electronic ticket writers decrease the time it takes to conduct stops for traffic enforcement.

Another strategy for increasing effectiveness of enforcement on a limited-budget is so-called "high-visibility enforcement." The primary goal is to encourage drivers' voluntary compliance with speed limits by creating the impression that there are a lot of ongoing enforcement activities. Times and locations for these activities may be announced ahead of time and officers establish highly visible enforcement operations in heavily trafficked areas. If done correctly, this strategy increases drivers' perception they are at risk of being caught if they violate the law. In general, voluntary compliance is the goal because police officers cannot be everywhere.

"Courtesy enforcement" can be effective in focusing the attention of road users on a new law, or on an existing law that has not been routinely enforced. Instead of receiving a citation, an offender is given a warning and, sometimes, even a gift - courtesy enforcement is usually implemented for a specific "trial" period of time, after which normal enforcement with citations is resumed. This approach has been used in Columbia to enforce laws requiring bicyclists to stop at Stop signs and red lights, ride on the right side of the road, and use lights at night, and it may be appropriate for safety-related violations by pedestrians and drivers. As with "high-visibility enforcement," the goal is education and voluntary compliance.

Finally "diversion programs" offer offenders the opportunity for reduced penalties if they attend an educational program related to their offence. For example, drivers found guilty of speeding may receive a smaller fine or fewer penalty points assessed against their driver's license.

Recommendation 10: Specifically, utilize automated enforcement such as red light cameras and speed cameras (FY18)

The Task Force strongly recommends the City Council reconsider automated enforcement [18], such as red light cameras and speed cameras, in spite of political opposition and legal challenges.

The Missouri Supreme Court ruled recently that automated enforcement using cameras is legal, as long as the person charged with a violation was the driver of the vehicle, identified by comparing a photograph of the violation with a file photograph of the person. Municipalities may not charge the owner of a vehicle, based on identification of the license plate. These violations require review and investigation by a law enforcement officer for a citation to be issued. Given the recent disbandment of the CPD Traffic Unit, additional resources would need to be allocated for CPD to conduct these reviews/investigations.

The primary desired outcomes of automated camera technology are to encourage voluntary compliance with traffic laws and increased safety for all road users. The importance of voluntary compliance is underscored by CPD's staffing shortages. Through the use of automated enforcement, violators could still be penalized for red light and speed violations with fewer CPD resources than traditional enforcement. Permission from MODOT would be required to deploy automated enforcement on their roadways within City limits, but MODOT policy allows red-light cameras at state highway intersections and speed cameras in school zones, work zones and Travel Safe Zones on the state highway system.

The Task Force acknowledges that automated enforcement is controversial, but feels it is a critical tool that cannot be discarded. A data-driven approach to the placement of cameras must be taken and automated enforcement should be accompanied by an effective public communication campaign that explains the benefits of this approach and dispels the myths.

Recommendation 11: Improve coordination and data-sharing between law enforcement, other agencies, and the public (start in FY17)

The Task Force recommends better coordination among the Columbia Police Department, University of Missouri Police Department, Boone County Sherriff's Department and State Highway Patrol, with regard to pedestrian safety.

Law enforcement agencies should work together to more effectively share information related to crashes, especially those in which pedestrians are killed or injured. They should also develop a shared understanding of the Vision Zero philosophy and work with other agencies (specifically Traffic Engineering agencies) and the general public to understand the causes of high-speed crashes and prevent them. Local law enforcement agencies should also seek out additional ways to coordinate and collaborate on enforcement efforts. These could include city- or countywide campaigns related to Vision Zero initiatives.

All of this could be accomplished through the creation of an Implementation Team, working under the Vision Zero Steering Committee.

Recommendation 12: Provide routine bicycle and pedestrian safety training for law enforcement officers (FY17)

In 2007, following the discovery that many officers were not familiar with the laws governing cyclists or with safe bicycling techniques, the PedNet Coalition developed a training program, "Bicycle Safety Training for Law Enforcement" [19] and has conducted the training with officers periodically. The training time limitations due to CPD's current staffing shortage precluded PedNet from being able to conduct the training for officers this year.

When it can be offered, the Task Force recommends that this training be expanded to include pedestrian safety laws and techniques, with the goal of giving police more empathy for the challenges faced by pedestrians in many parts of Columbia and making them more comfortable enforcing ordinances and statutes related to multi-modal transportation.

Recommendation 13: Start a new program of Road Safety Audits and Assessments (start in FY17)

Conducting safety audits and assessments helps identify and prioritize dangerous roads and intersections and helps identify solutions to improve safety. Physical design parameters have a potent effect on traffic speeds and affect the 85th percentile traffic speed which is a factor in setting speed limits (see Recommendation 8: Reduce legal, posted speed limit). Road safety audits and assessments are a first step in implementing physical alterations to reduce traffic speeds.

A road safety audit is a formal safety performance review of a road or intersection conducted by an independent, multidisciplinary team which considers all users, accounts for user capabilities and limitations, and generates a formal report. A road safety assessment is similar to an audit, but is not necessarily conducted by a formal professional team. With a simple form such as the Sidewalks and Streets Survey developed by AARP [20] or the Walkability Checklist developed by San Diego Walks [21], an assessment does not require special training and can be conducted by city staff, by concerned parents near a school zone, or by members of a neighborhood association. An assessment doesn't yield the professional and detailed information of an audit, but is a low-cost and quick way to collect data on a larger number of roads and intersections. Assessed roads and intersections could then be targeted for traffic calming or other appropriate measures, or scheduled for a road safety audit for more detailed information.

Columbia's existing Neighborhood Traffic Management Program [22] is a good starting point for a Road Safety Audit and Assessment Program. Under this program, neighborhoods request traffic calming or report problems, Public Works determines what measures best alleviate the problem, and the project waits on a list until funding is available. A Road Safety Audit and Assessment Program will allow neighborhoods to collect data to support the need for traffic calming or other measures, help prioritize areas based on data rather than self-report of problems, and target streets outside of neighborhoods. Audits and assessments will also provide data for determining which solutions to implement. There are many traffic calming tools that can improve safety, and while speed bumps are among the most effective, they are not appropriate in every situation.

The Task Force recommends starting a new program of Road Safety Audits and Assessments. The first step will be to create an assessment tool that City staff, concerned citizens, and other agencies can use. A communications and outreach effort should be carried out to promote use of the tool, especially in areas that do not have a high degree of community involvement. In addition, City staff should identify roads and intersections that would benefit from a Road Safety Audit, determine a feasible number of Road Safety Audits to conduct annually, and engage a Road Safety Audit team.

Finally, safety should be prioritized above other considerations when allocating funding for road improvements, with data from Road Safety Audits and Assessments guiding project selection. This would require increasing funding for the existing Neighborhood Traffic Management Program.

Recommendation 14: Create a new position of Traffic Safety Engineer/Crash Analyst (FY18)

There were two recurring themes during the meetings of the Enforcement subcommittee:

1. CPD has insufficient staff capacity to enforce traffic violations effectively;
2. There is room for improvement in the coordination between CPD and Public Works to analyze crashes and work collaboratively to develop safer engineering designs.

The Enforcement Subcommittee determined that the City does not have adequate staff in the Public Works or Police Departments to coordinate and conduct detailed crash safety analyses and research how the engineering design of roadways and intersections may or may not have contributed to crashes. Roadway, intersection, and sidewalk/crosswalk design is a major factor in driver and pedestrian behavior and, therefore, in driver and pedestrian errors that lead to crashes which may be fatal. Improving the city's staff capacity to study this data could result in improved inter-departmental traffic safety communication and safety performance. As discussed under Recommendation 6, the first challenge is inextricably connected with CPD's general lack of staff capacity, and will require a political solution. There are some positive signs that this larger problem will be addressed within the next 1-2 years.

Assuming the general problem of CPD staffing levels is addressed, the Task Force recommends the creation of a new position of Traffic Safety Engineer/Crash Analyst as part of that larger process. This could be a joint appointment - working with or between Public Works and CPD to coordinate multiple activities, such as:

- Chair an Implementation Team of the Vision Zero Steering Committee that includes traffic engineers and local law enforcement;
- Design, develop and manage the new program of Road Safety Audits and Assessments described under Recommendation 13;
- Analyze traffic crashes with the goal of understanding the engineering design parameters that contribute to traffic crashes - this analysis would be conducted after and in addition to regular CPD investigations, which are intended to determine whether or not probable cause exists to issue citations or make arrests for traffic law violations;
- Make recommendations for improvements and reforms in road design and engineering standards to increase safety.

The new Traffic Safety Engineer/Crash Analyst position could start as a part-time appointment with the goal of expanding it to full-time in the future.

Recommendation 15: Identify engineering design parameters that contribute to pedestrian deaths and injuries (FY18)

Twenty-six people were killed and 254 were seriously injured in traffic crashes in Columbia between 2010 and 2014. In many of these cases, errors were made or violations were committed by drivers and other road users, which contributed to these tragedies.

However, a Vision Zero philosophy for transportation system design and operation includes the assertion that transportation systems should be designed so that user errors are not fatal. The fact of 26 traffic fatalities in a four-year period indicates that Columbia's transportation system is failing to protect its users. Under a Vision Zero Policy, Columbia City Council would set a goal to reduce the number of traffic fatalities to zero in a certain number of years.

It's instructive to make the observation that the airline industry has a Vision Zero philosophy - safety is the top priority, deaths and injuries are considered unacceptable, and systems are designed so that user errors are not fatal. Airline crashes, when they occur, are considered national catastrophes and they are extremely rare - by way of contrast, the 30,000 Americans killed on the roads every year is equivalent to a Jumbo Jet crash twice a week.

Therefore, the Task Force recommends that the scope of work for the new Traffic Safety Engineer/Crash Analyst should be to analyze "crash hotspots," identify engineering design parameters that contribute to pedestrian (and motorist) deaths and injuries, and use this information to improve and reform road design and engineering standards to increase safety. Since vehicle speed has such a strong correlation with the severity of crashes, many of these design parameters will be the same ones that are known to influence the speed at which motorists drive - lane widths, shoulders, clearances, sight distances, and curvature, and super-elevation, etc.

There is really no doubt that roadway systems can be designed to prevent deaths and serious injuries. Political will to make safety the top priority is what's lacking - the Task Force urges members of the City Council to provide that political leadership.

Recommendation 16: Improve and reform road design and engineering standards to increase safety (start in FY18)

Having applied an evidence-based scientific process to identify the engineering design parameters that contribute to roadway deaths and injuries, these findings should be used to improve and reform road design and engineering standards to increase safety.

This is the Task Force's sixteenth and final recommendation. Several specific reforms are anticipated to arise from this process:

- Modify lane widths, clearances, sight distances, and curvature to reduce operating speeds;
- Ensure that new sidewalks are connected to existing ones to create complete networks;
- Require safe crosswalks to be installed on all City streets, with a maximum separation that depends on adjacent land use, density, etc.;
- Adopt a "complete intersections" policy, meaning that all four pedestrian crosswalk legs must be safe and operational at all intersections (see Appendix G);

- Employ "pedestrian lead interval" signal timing and an "all red phase" (also known as "pedestrian scramble") at intersections with large pedestrian volumes;
- Include traffic calming features - "bulb-outs," raised crosswalks, color/texture treatments, landscaped islands, etc. - in initial road designs, not as an afterthought;
- Ensure all facilities are designed and constructed in accordance with the Americans with Disabilities Act (ADA) and Public Right of Way Accessibility Guidelines (PROWAG)
- Improve lighting and add audible pedestrian signals at all crosswalks.

In summary, returning to the first assertion of a Vision Zero philosophy, the Task Force urges the City of Columbia to make safety the highest priority in road system design and operations.

Section 5-5: Evaluation and Accountability

The ultimate goal of a Vision Zero Policy is to eliminate traffic fatalities and serious injuries.

However, more specific metrics must be established to properly evaluate the success of the Task Force recommendations and communicate progress to the public. In addition, given the undeniable limits to city resources, a regular system of evaluation will allow resources to be concentrated on programs that are most effective in creating a safe pedestrian experience for Columbia's citizens.

Vision Zero Steering Committee

After adopting a Vision Zero policy, the Task Force recommends creation of a Vision Zero Steering Committee, led by City staff. As discussed under Recommendation 1, the Steering Committee should include representation from various departments, commissions, stakeholders, and the community, and should solicit input from the public to develop an implementable, multi-year Vision Zero Strategy.

Critically, the Steering Committee should also define the metrics by which success of the Vision Zero Strategy will be measured and the system for collecting evaluation data. A model for this process could be the work of the Columbia Visioning Commission, which was established to monitor implementations of the recommendations of the City's visioning process.

Establishment of Benchmarks

The establishment and tracking of key benchmarks is the best way to determine if these recommendations are moving us in the direction of zero pedestrian injuries or fatalities.

"Primary Benchmarks" are actual pedestrian injuries and fatalities. There are a number of entities currently monitoring and mapping these data - in the interests of sharing data and collaborating on joint solutions, these groups should provide a comprehensive list of key data points that can be tracked over time. This list should be compiled with an eye towards the recommendations put forth in this report and on the overall goal of zero pedestrian injuries and fatalities.

"Secondary Benchmarks" are those metrics that objectively make the pedestrian experience safer and more pleasant, even if it is not possible to connect them directly with a reduction of pedestrian injuries or fatalities. Possible metrics include the number of speeding vehicles on a street, the number of count-down timers at crosswalks, the number of bus stops that empty onto a shoulder rather than a sidewalk, and the distance between crosswalks on a major highway. The Evaluation Team, along with the CPD and other entities currently tracking pedestrian injuries, should consider which, if any, of these secondary benchmarks to monitor.

To provide full accountability to the public and to provide a platform from which to collect public input, the Task Force recommends these benchmarks and a corresponding incident/project map be placed on a Vision Zero Columbia website. In addition, some sort of interactive element where citizens can map their own observations regarding pedestrian safety should be provided. Finally, a yearly "by-the-numbers" report on these benchmarks should be published to provide a snapshot of safety conditions over time.

Tracking of Vision Zero Recommendations

The Vision Zero Steering Committee will work with the responsible departments to prioritize the projects stemming from these recommendations and create a realistic schedule for moving forward. They will also include project-specific goals by which progress can be measured, such as the number of attendees at pedestrian safety classes, number of crosswalks improved, legislation passed, etc.

Their progress should be presented to council in the form of a report and care should be taken to highlight whether the project addresses education, enforcement, and/or engineering and in which ward/s the project is located. The Task Force also recommends the city consider a monitoring process similar to that used with the visioning process in which any council action specifically relating to a Vision Zero recommendation would be marked accordingly on staff reports to council. Finally, the Vision Zero website should convey this information as well, including a comprehensive list of completed, ongoing, and upcoming projects.

Appendix A:

Motor Vehicle Collisions with Pedestrians in Columbia (late 2014 and early 2015)

October 13th, 2014, at Rangeline St. and Elleta Blvd.

- Vehicle left travel lanes and struck two pedestrians walking along shoulder
- KILLED: Dianne Barney, age 44
- INJURED: Michael Johnson, age 52

December 26th, 2014, Hwy. 63 near Hwy. 763

- Pedestrian attempting to cross highway was struck by vehicle
- KILLED: Gregory Anderson, age 29

December 31st, 2014, Stadium Blvd. and Worley St.

- Pedestrian crossing at intersection (believed to be against pedestrian signal) struck by two vehicles
- KILLED: Jackie Cheatom, age 54

January 22nd, 2015, College Ave. and Rollins St.

- Pedestrian crossing legally with pedestrian signal struck by left-turning vehicle
- INJURED: Amy Wasowicz, age 18

January 22nd, 2015, Nifong Blvd. near Providence Rd.

- Pedestrian crossing mid-block struck by vehicle
- INJURED: Darryl Darling, age 20

January 22nd, 2015, Providence Rd. near Carter Ln.

- Transit rider, after alighting from bus, struck by vehicle while attempting to cross highway
- KILLED: Kui Zou, age 24

April 10th, 2015, Broadway near Waugh St.

- Pedestrian crossing legally in pedestrian crosswalk struck by vehicle
- INJURED: Name not released

April 27th, 2015, Providence Rd. near Douglass High

- Pedestrian with baby in stroller crossing legally in crosswalk with pedestrian signal - stroller struck by vehicle
- STRUCK BY CAR: Angel Smith and baby daughter

Appendix B:
May 8th, 2015 Press Release
Announcing Formation of a Mayor's Task Force on Pedestrian Safety

May 8th, 2015

Mayor Announces Pedestrian Safety Task Force

Group will study four fatal and four serious-injury collisions in last 6 months

Columbia, MO - Mayor Bob McDavid announced today the formation of the Mayor's Task Force on Pedestrian Safety. He appointed City Council representatives Clyde Ruffin (Ward 1) and Ian Thomas (Ward 4) to head up the Task Force.

"We have experienced a spate of automobile crashes involving pedestrians in recent months," said McDavid, "I want to find out whether this is an unusual trend, how pedestrian safety in Columbia compares with our peer cities, and what steps we need to take to protect people." Four pedestrians have been killed and four others have been seriously injured in seven separate crashes since October, 2014.

According to Task Force Co-Chair Ian Thomas, who works for the national organization America Walks, "Columbia's recent experience is similar to what we're seeing across the country. People are moving into cities, they're walking more, and they're getting hit by cars more often." The U.S. Department of Transportation reports that annual pedestrian fatalities increased 15% between 2009 and 2012. Thomas added, "The cause appears to be a combination of driver and pedestrian inattention, excessive vehicle speeds in areas where people are walking, and inadequate pedestrian infrastructure."

Co-Chair Clyde Ruffin, whose ward includes some of Columbia's poorest neighborhoods, said low-income residents are especially vulnerable. "Many low-paid workers do not own a car - they're walking to work at hotels and fast-food restaurants along streets with high-speed traffic and no sidewalks." Most of the recent crashes occurred on main highways, including Range Line Street, Stadium Boulevard, Providence Road, and College Avenue.

Brant Kassel, Chair of the Bicycle and Pedestrian Commission, which asked McDavid to form the Task Force, said "I believe the Pedestrian Safety Task Force will have a positive impact on our city. Too many pedestrians have been hit by cars in recent months for the status quo to continue. Columbia is a great place to live and our citizens should feel safe and free to move around Columbia whether they are walking, biking, or driving."

According to McDavid, the Task Force will consist of 15-20 members. Several City Commissions, Neighborhood Associations, the University of Missouri, Missouri Students Association, and Missouri Department of Transportation will be invited to submit nominations. He said, "The Task Force will be in place for a maximum of twelve months and then deliver a report and recommendations to City Council."

McDavid added, "I'd like to see some kind of future goal established for reducing these incidents so we can measure the success of our interventions." Numerous cities have recently established "Vision Zero" campaigns, modeled on New York City's successful initiative, which has dramatically reduced traffic injuries and fatalities, primarily by slowing down vehicles.

Appendix C:
May 18th, 2015 City Council Resolution
Establishing Mayor's Task Force on Pedestrian Safety

Introduced by _____ Council Bill No. _____ R 84-15 _____

A RESOLUTION

establishing a task force on pedestrian safety.

WHEREAS, since October 2014, four individuals have been killed and four others have been seriously injured as a result of being struck by automobiles while walking on Columbia streets; and

WHEREAS, U.S. Secretary of Transportation Anthony Foxx has established the "Mayors' Challenge for Safer People, Safer Streets" to address rising pedestrian death and injury rates nationwide; and

WHEREAS, Mayor McDavid is a participant in Secretary Foxx's "Mayors' Challenge for Safer People, Safer Streets"; and

WHEREAS, engaging in a study and evaluation of pedestrian safety in Columbia will benefit all citizens of Columbia.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF COLUMBIA, MISSOURI, AS FOLLOWS:

SECTION 1. There is hereby established the Mayor's Task Force on Pedestrian Safety. Its purposes include determining the history, trends and current status of pedestrian deaths and injuries in Columbia together with a study of various community strategies to increase pedestrian safety.

SECTION 2. The Task Force shall evaluate available resources and provide recommendations on what can be done by the City government and by citizens themselves working in a cooperative way to decrease collisions between automobiles and pedestrians. The evaluation shall include, but not be limited to:

- * Analysis of the problem;
- * Education and community outreach strategies;
- * Law enforcement strategies and policies; and
- * Engineering solutions.

SECTION 3. The Task Force shall consist of fifteen (15) members appointed by the Mayor. In addition to Task Force members, Council members Clyde Ruffin and Ian Thomas shall serve as co-chair persons. A quorum to hold a meeting shall consist of eight (8) members plus one (1) co-chair. All meetings shall be open to involvement and participation by as many additional interested community members who desire to attend.

Appendix C:
May 18th, 2015 City Council Resolution
Establishing Mayor's Task Force on Pedestrian Safety (continued)

SECTION 4. The Task Force shall make a report to the City Council of its findings and recommendations by May 16, 2016. The Task Force shall be dissolved upon submitting its final report.

SECTION 5. The Task Force shall be provided reasonable staff support and shall submit a budget to cover reasonable and necessary expenses.

ADOPTED this _____ day of _____, 2015. ATTEST:

_____ City Clerk

APPROVED AS TO FORM:

_____ City Counselor

_____ Mayor and Presiding Officer

Appendix D: Biographies of Task Force Members



Co-chair Clyde Ruffin (Ward 1 City Councilman) is the Senior Pastor of the Historic Second Baptist Church in Columbia. He joined the University of Missouri faculty in 1982 and was granted the title of Professor and Chair Emeritus in 2015. He has received the Kemper Fellowship for Teaching Excellence and the Martin Luther King Community Service Award.



Co-chair Ian Thomas (Ward 4 City Councilman) is the State and Local Program Director with America Walks. Previously, he served as the founding Director of Columbia's PedNet Coalition, developing one of the largest Walking School Bus programs in the country and coordinating a campaign that led to Columbia adopting the first "complete streets" policy in Missouri.



Staff Liaison Mitch Skov is a Senior Planner in Community Development. He has worked for the City of Columbia since 1987 and staffs the Columbia Area Transportation Study Org., through which transportation planning is done in partnership with Boone County and MoDOT. Mitch has a master's degree in Urban and Regional Planning from the University of Illinois.



James Beattie is a Senior Highway Designer with Missouri Department of Transportation. He has degrees in Civil Engineering and Drafting and Design Technology, and his experience includes highway, bicycle, and pedestrian facility design. James retired from the U.S. Army Reserve in 2007 after serving 9 years on active duty and 11 years in the reserves.



Marin Blevin is Chair of the Columbia Parks and Recreation Commission. He is retired from State Farm Insurance where he was a Loss Mitigation/Safety Instructor and has also worked as a convention director, freelance writer, and Special Needs Sports Coach. He is a US Army Veteran and has masters degrees in Theater Directing & Production and Business.



Nate Brown is Manager of External Relations at the Reynolds Journalism Institute and a Columbia native. He previously worked for the March of Dimes in Washington, D.C., developing and implementing communications activities, media strategies and advocacy campaigns. He also served on the Logan Circle Community Association board of advisors.

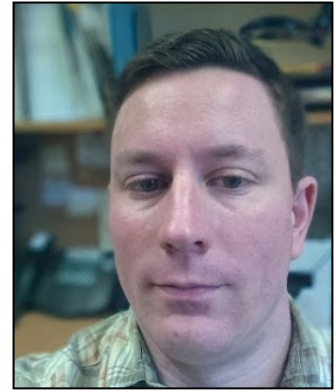
Appendix D: Biographies of Task Force Members (continued)



Tec Chapman is Executive Director of Services for Independent Living in Columbia. He has nearly 30 years of experience supporting persons with disabilities, including serving as Deputy Director for the Missouri Division of Developmental Disabilities. Tec's doctoral program focused on issues of policy, disability, and interdisciplinary practice.



Katie Essing is Executive Director for Columbia's Downtown Community Improvement District, which strives to cultivate a centrally located, eclectic and sustainable urban business district. She has over 20 years of experience in retail and commercial real estate, including serving as Senior General Manager for The Mall in Columbia, Maryland.



Steven Hanson has served on the City of Columbia's Public Transit Advisory Commission (PTAC) since September 2011, and he is PTAC's representative on the Mayor's Pedestrian Safety Task Force. Steven works in a research and clinical laboratory at the University of Missouri focused on improving methods for measuring diabetes biomarkers.



Leeann Johnson is the Trauma Program Manager with the Frank L. Mitchell, Jr. MD Trauma Center at MU Health Care. She has a passion for caring for injured trauma patients, and spent 28 years as Flight Nurse and Chief Flight Nurse with the Staff for Life Helicopter Service. Leeann has a Bachelor's of Science in Nursing from the University of Missouri.



Kyle Riley is a Mental Health Advocate with Phoenix Health Programs in Columbia. Phoenix is a nonprofit substance abuse treatment center offering a continuum of care for individuals with addiction and co-occurring mental illness. Kyle graduated from Central Methodist University in 2000 with a Bachelor of Science degree in Interdisciplinary Studies.



Rachel Ruhlen began bicycling for transportation ten years ago and is a member of Columbia's Bicycle & Pedestrian and Public Transit Advisory Commissions. She is presently studying for a Master's Degree in Sustainable Transportation through the University of Washington. Rachel is also President of the Missouri Bicycle & Pedestrian Federation and a Board member of PedNet.

Appendix D: Biographies of Task Force Members (continued)



Frank Schmidt is Professor of Biochemistry at the University of Missouri. He has served as Chair of the MU Faculty Council, President of the Fairview Neighborhood Association, and President and Secretary of the Columbia Bicycle Club. A 38-year resident of Columbia, he was a member of a City of Columbia Task Force that helped shape the current City Planning process.



Lawrence Simonson is the Assistant Director of the PedNet Coalition. He joined PedNet in 2010, motivated by the belief that a strong community is built around an active transportation network. He is a League of American Bicyclists Certified Instructor and a member of the City's Bicycle and Pedestrian Commission. Lawrence has also worked as a Registered Dietitian.



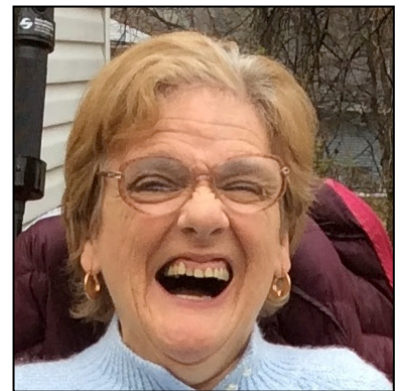
Michael Szewczyk, Physician, Boone Hospital Center, has practiced for many years in the emergency department and now serves as the Medical Director of Occupational Medicine of Mid Missouri. He is a long standing member of the Board of Directors of the Missouri College of Emergency Physicians as well as the City of Columbia/Boone County Board of Health.



Amy Wasowicz is a sophomore at the University of Missouri, double-majoring in Journalism and Political Science. She is currently the Interim Chair of the Campus and Community Relations Committee with the Missouri Students Association. In 2015, Amy was struck by a car while legally crossing College Avenue in Columbia on the crosswalk.



John White is Director of Safety and Security for Columbia Public Schools. In this position, he conducts safety audits and programs for pupils and staff. Previously, he was a lieutenant with Columbia Police Dept., serving on the SWAT team, as a field training officer, and a school resource officer. John has a bachelor's degree in criminal justice administration.



Dawn Zeterberg moved to Columbia in 1982 and found she could get around more easily in her wheelchair here than in her native St. Louis. She is passionate about safety and accessibility for everyone, and has been an advocate for disability rights and safety for 33 years. As a disabled pedestrian, Dawn brings a unique perspective to the Task Force on Pedestrian Safety.

Appendix E:

Additional Acknowledgements and Recognition for Service to the Task Force

Interim MSA Representative:

Amy Wasowicz was nominated represent the Missouri Students Association (MSA) on the Task Force. However, because she was out of town for the summer, Syed Ejaz was appointed as the Interim MSA representative, and attended the June, July, and August meetings.

Syed Ejaz is a senior at the University of Missouri and is the former Campus and Community Relations Committee Chairman of the Missouri Students Association, the undergraduate student government at Mizzou. As Chairman, he worked with university and city officials to advocate for better pedestrian safety conditions on campus and improved public transportation for students. Syed is studying finance, political science, and economics.



Guest Members of Subcommittees:

- Joe Alder (Columbians for Pedestrian Quality Experience)
- Carrie Gartner (Business Loop CID)
- Ann Marie Gortmaker (Services for Independent Living)
- Sarah Grim (Welcome Home)
- Katherine Lee (Public Transit Advisory Commission)
- Joseph Sell (Missouri Students Association)
- Annette Triplett (PedNet Coalition)

Guest Presenters:

- Troy Balthazor (Great Plains ADA)
- Drew Brooks (Columbia Public Works)
- Trent Brooks (Missouri Department of Transportation)
- Gretchen Maune (Tiger Council of the Blind)
- Mike Sokoff (University of Missouri)

City Staff Support:

- Janet Godon (Parks and Recreation Department)
- Sgt. Curtis Perkins (Columbia Police Department)
- Lt. Krista Shouse-Jones (Columbia Police Department)
- Richard Stone (Columbia Public Works)

Appendix F:

March 17th, 2016 Letter to Missouri General Assembly Regarding Bills Relating to Pedestrian Safety

Dear Legislator:

In May, 2015, Columbia Mayor Bob McDavid convened a Task Force on Pedestrian Safety. The purpose of the Task Force is to investigate the causes of a recent spate of traffic crashes in which an unusually high number of people were killed or seriously injured while walking, and make recommendations to the Mayor and City Council for improving pedestrian safety.

Estimates suggest that at any given time, over 50% of Missourians do not drive a motor vehicle and instead their main form of transportation is walking. Walking is the most basic form of transportation, and allows hardworking people who are unable or choose not to drive, including the elderly, disabled and children walking to school, to maintain their independence while living out their daily lives.

Even where sidewalks and safe walking paths are available, people who walk to their destinations will almost always have to interact with people driving motor vehicles. As a result, the laws of our state play a vital role in determining the risk of injury and death for the most vulnerable people on our road system. With that in mind, we would like to give our support or opposition to the following bills based on whether they will make travel safer or more dangerous for those who walk. Ultimately these bills would impact all Missourians, as we are all pedestrians at some point in our day.

We support:

- HB1813 and SB917: Increased the penalties and license suspension periods for failing to yield the right-of-way. Failing to yield the right-of-way is particularly dangerous to vulnerable road users, such as people walking.

- SB569, SB821, HB2126, HB1423, HB1377, HB1542: Prohibit texting and/or use of hand-held wireless device while driving. Distracted driving is particularly dangerous to vulnerable road users. We strongly support HB2126, which bans texting AND use of hand-held wireless devices for drivers of commercial passenger vehicles, and would like to see this policy expanded to all drivers.

- HB2178: Requires high schools to offer driver's education courses. Missouri moved away from requiring driver's ed for new drivers some years ago, replacing the Driver's Ed requirement with a graduated driver license system. Many young drivers never go through a course of intensive learning of the rules of the road or guided driving practice.

We oppose:

- HB2264: Allows a right turn on red without a complete stop. Even with a requirement to stop on red before completing a right turn, far too many motorists fail to look for people walking who are crossing the adjoining street with the green light. Eliminating the requirement to stop will exacerbate an already dangerous problem.

- HB1945: Prohibits the use of automated traffic enforcement systems. The Columbia Police Department was recently forced to disband its entire traffic unit due to budget constraints, resulting in no dedicated traffic enforcement in the city. Automated traffic enforcement systems allow law enforcement to use cost-saving technology to curb dangerous behaviors that are particularly dangerous to vulnerable road users, such as speeding and running red lights, while saving precious tax dollars.

Thank you,

Members of the Columbia Mayor's Task Force on Pedestrian Safety

Appendix G:

July 30th, 2015 Letter from Bicycle & Pedestrian Commission Proposing A "Complete Intersections Policy"

Memorandum

To: Disabilities Commission
Mayor's Task Force on Pedestrian Safety
Public Transit Advisory Commission
From: Bicycle/Pedestrian Commission
Date: July 30, 2015
Subject: Complete Intersection Policy for the City of Columbia

Dear Commissioners,

Over recent years, the City of Columbia has made great strides in developing a community that allows its citizens to safely travel to and from work, leisure, and other activities by a variety of transportation modes. These modes include motor vehicles, buses, bicycles, wheelchairs, and walking. While significant investments have been made to increase traffic safety, many intersections still pose serious hazards and barriers to travel without a motor vehicle. This also applies to the use of CoMo Connect, since bus transportation requires walking, cycling, or wheeling to and from bus stops.

A truly walkable community provides a well-connected network of sidewalks and bike lanes throughout the metropolitan area. Such a network must include intersections to its full extent to increase traffic safety and connectivity for all participants. Recognizing the importance of improving safety within the City of Columbia, Mayor McDavid recently signed on to the U.S.DOT's Mayor's Challenge for Safer People, Safer Streets. This challenge calls for the adoption of a complete streets approach to provide safety and convenience, whether travelling by car, train, bicycle, wheelchair, or on foot.

As you are probably aware, there are numerous intersections within the Columbia metropolitan area, many of them on major roads, which are pinch points for those traveling by foot, bicycle, or wheelchair. For example, some intersections do not have crosswalks on each leg of the intersection. This is sometimes done in an effort to allocate dwindling resources in the areas of greatest need or to comply with MoDOT policy that requires connecting sidewalk on both sides of the street before crosswalks are installed.

The most efficient way to reduce gaps and barriers in our pedestrian and bicycling network is to design intersections to accommodate pedestrians and bicyclists when the intersection is being built, renovated, or maintained. This may include crosswalks, pedestrian walk signals, appropriate lighting, curb ramps, narrower crossing widths, and other design elements. The MoDOT policy to only install crosswalks to existing sidewalks is short-sighted and does not align with regional and City priorities to promote walking and bicycling. Just as the installation of a sidewalk will increase the likelihood of the addition of a crosswalk, the reverse is true. The City has an ordinance in place that requires each lot developed within the city limits to be equipped with a sidewalk. We want to hold the City, the County and the State to the same standards as private developers.

The Bicycle/Pedestrian Commission is thus asking you to join us in our call to City Council to expand our existing Complete Streets policy to include intersections. Just as Complete Streets are designed with consideration of the needs of all users of the roadway, intersections should be designed with consideration of the needs of all users of the roadway.

If you agree with our desire to call City Council to action, please draft your own letter and forward to the Council in time for discussion during the September 8, 2015 meeting.

Thank you for your support



Mike Burden
CHAIR, BIKE/PEDESTRIAN COMMISSION

Appendix H:
February 18th, 2016 Letter from Public Transit Advisory Commission
Supporting a Vision Zero Policy

TO: Mayor's Task Force on Pedestrian Safety

FROM: Public Transit Advisory Commission

DATE: February 18, 2016

Dear Councilmen Thomas and Ruffin:

As the Public Transit Advisory Commission one of our overall charges is to "advise city staff with regard to transit policy and safety matters concerning transit issues affecting the city", especially as it relates to pedestrian safety and accessibility to bus stops.

Because of this charge the Public Transit Advisory Commission (PTAC) is in unanimous support of adopting Vision Zero for Columbia. We strongly believe in the fundamental message of Vision Zero that death and injury on our city streets is not acceptable and is preventable. We should no longer regard serious car crashes as inevitable. These are not "accidents", they are crashes or collisions, and are a result of bad behavior and unforgiving roadway designs.

We know that culture change does not come easy, so we suggest a vigorous outreach program to the public to begin with. At the same time, we suggest the City Council create a position of "Transportation Safety Engineer". That person could begin implementing design changes that emphasize lowering speed limits and creating safer street crossings. Third, we must increase penalties for those who have dangerous behaviors that result in injury and death.

Vision Zero will require a great deal of education in our community and a lot of collaboration not only within Columbia City Departments, but also with MoDOT. The PTAC is dedicated to working with all entities striving to achieve the goals of Vision Zero. The PTAC voted unanimously on February 18, 2016 to send this letter of recommendation for adopting Vision Zero on to the Mayor's Task Force on Pedestrian Safety.

Thank you.

Sincerely,

Cheryl Price

Cheryl Price, Chair
Public Transit Advisory Commission

Appendix I:
March 16th, 2016 Letter from Bicycle and Pedestrian Commission
Supporting a Vision Zero Policy

TO: Mayor's Task Force on Pedestrian Safety

FROM: Bicycle & Pedestrian Commission

DATE: March 16, 2016

Dear Council:

The Bicycle & Pedestrian Commission supports Vision Zero for Columbia. Vision Zero simply states that any traffic fatality, whether a person is traveling by car or any other way, is unacceptable, and strives to eliminate all traffic fatalities. Vision Zero has been adopted by several cities and it is showing results: New York City's traffic fatalities have reached record lows since they began recording numbers of fatalities in the early 1900s. These cities are proving that transportation can be safe and efficient for everyone.

To implement Vision Zero, we endorse the recommendations of the Pedestrian Safety Task Force. The first step is a public and vocal adoption of Vision Zero at the highest levels of city government and administration. This will require hard work and reaching out to the public to shift the culture to one that does not accept traffic fatalities, and the Bike/Ped Commission is willing to step up to the plate to facilitate public engagement. Furthermore, we're committed to supporting the efforts of city staff in overseeing, monitoring, coordinating implementation of the Pedestrian Safety Task Force recommendations, including dedicating our commission meeting time.

Please adopt Vision Zero and implement recommendations from the Pedestrian Safety Task Force. We will do our part to bring Vision Zero to Columbia and make Columbia the safest place to drive, walk, bicycle, ride the bus, and operate a wheelchair.

Thank you,

Mike Burden, Chair
Bicycle & Pedestrian Commission

Appendix J:
March 18th, 2016 Letter from Disabilities Commission
Supporting a Vision Zero Policy

March 18, 2016

To: Mayor and Members of City Council

From: Columbia Disabilities Commission

Subject: Vision Zero

The Columbia Disabilities Commission supports the proposal to adopt Vision Zero in Columbia. Vision Zero emphasizes a proactive approach to roadway and pedestrian safety and it encourages universal design facilities to accommodate and protect all travelers in the community. This approach is wholly consistent with this Commission's efforts to continue to improve safe, reliable and inclusive transportation opportunities for people with disabilities.

At the Commission's regular meeting on March 10, 2016, the Commission members voted unanimously to send a letter of support to the City Council for the proposal to adopt Vision Zero. It's especially critical to us as research has shown people with disabilities, especially wheelchair users, are injured and killed at a higher rate than the general population of pedestrians.

Sincerely,

Chuck Graham, Chair
Columbia Disabilities Commission

References

1. Pedestrian Fatalities Projected to Spike 10% in 2015 (Governors Highway Safety Association) - <http://www.ghsa.org/html/media/pressreleases/2016/20160308peds.html>
2. Development of road safety in Sweden - https://www.unece.org/fileadmin/DAM/trans/doc/2012/wp1/NatDev-2012_Sweden_October.pdf
3. Vision Zero Initiative - <http://www.visionzeroinitiative.com>
4. Why Sweden has so few road deaths (The Economist) - <http://www.economist.com/blogs/economist-explains/2014/02/economist-explains-16>
5. World report of road traffic injury prevention (World Health Organization) - http://who.int/violence_injury_prevention/publications/road_traffic/world_report/chapter1.pdf
6. NYC Vision Zero - <http://nyc.gov/visionzero>
7. Vision Zero Year Two, Year End Review - <http://www.nyc.gov/html/visionzero/assets/vz-year-end-report.pdf>
8. Vision Zero SF - <http://visionzerosf.org/>
9. Vision Zero: Seattle's plan to end traffic deaths and serious injuries by 2030 - <http://www.seattle.gov/Documents/Departments/beSuperSafe/VisionZeroPlan.pdf>
10. Seattle Vision Zero - <http://www.seattle.gov/visionzero>
11. Motor Vehicle Crash Deaths in Metropolitan Areas (CDC) - <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6128a2.htm>
12. CATSO 2040 Long-Range Transportation Plan - <http://www.gocolumbiamo.com/community-development/wp-content/uploads/sites/14/2015/09/FINALApproved2040LRTP20402-27-14forweb.pdf>
13. City of Columbia Vision Summary & Vision Statements- <http://www.gocolumbiamo.com/visioning/wp-content/uploads/sites/12/2015/02/visionsummary.pdf>
14. Missouri Department of Health and Senior Services MICA - <http://health.mo.gov/data/mica/MICA/>
15. United States Census Bureau. American FactFinder - <http://factfinder.census.gov/>
16. State of Missouri STARS Reporting - http://www.mshp.dps.missouri.gov/MSHPWeb/SAC/stars_index.html
17. Impact Speed and a Pedestrian's Risk of Severe Injury or Death (AAA Foundation for Traffic Safety) - <https://www.aaafoundation.org/sites/default/files/2011PedestrianRiskVsSpeed.pdf>
18. An Overview of Automated Enforcement Systems and Their Potential for Improving Pedestrian and Bicyclist Safety (Pedestrian and Bicycle Information Center, 2012) - http://www.pedbikeinfo.org/cms/downloads/WhitePaper_AutomatedSafetyEnforcement_PBIC.pdf
19. Rights and Duties: A Law Enforcement Officer's Guide to Bicycling Issues (PedNet Coalition) - <http://pednet.org/consulting/police-training/>
20. Sidewalks and Streets Survey (AARP) - <http://createthegood.org/toolkit/sidewalks-and-streets-survey-1>
21. Walkability Checklist (Circulate San Diego) - http://www.circulatesd.org/walkability_checklist
22. City of Columbia Neighborhood Traffic Management Program - <https://www.gocolumbiamo.com/PublicWorks/Traffic/documents/NeighborhoodTrafficManagementProgram.pdf>