

# State of Kentucky

## Pedestrian and Bicyclist Safety Program Technical Assessment

03/09/2022

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The Team thanks the National Highway Traffic Safety Administration (NHTSA) for helping to give a national and regional perspective and support to the assessment. Ruth Esteban-Muir facilitated the assessment process. Darren Thacker provided additional support and guidance.

The Team thanks all those interviewed as part of the assessment for their time and energy preparing and delivering their presentations. Their openness and thoroughness in discussing their activities to address pedestrian and bicycle safety in Kentucky greatly assisted the team in conducting a complete review. The Team commends all involved in the day-to-day efforts to promote and foster safe walking and biking in Kentucky.

Each member of the Team appreciates the opportunity to have served and hopes that consideration and implementation of the proposed recommendations will enable Kentucky to continue to improve its pedestrian and bicycle safety program.





## Introduction

The National Highway Traffic Safety Administration's (NHTSA) mission is to reduce deaths, injuries, and economic and property losses resulting from motor vehicle crashes. NHTSA offers Highway Safety Program Assessments to the States in its ongoing pursuit to reduce traffic crashes and subsequent fatalities and injuries.

The Highway Safety Program Assessment process is an assistance tool that allows State management to review various highway safety and emergency medical services (EMS) programs. Program assessments are provided for EMS, occupant protection, impaired driving, traffic records, motorcycle safety, police traffic services, drivers education, and pedestrian and bicyclist safety.

The purpose of the assessment is to allow State management to review all components of a given highway safety or EMS program, note the program's strengths and accomplishments, and note where improvements can be made. The assessment can be used as a management tool for planning purposes and for making decisions about how to best use available resources. The highway safety and EMS program assessments provide an organized approach, along with well-defined procedures, that States can use to meet these objectives. The assessments are cooperative efforts among State highway safety offices, state EMS offices, and NHTSA. In some instances, the private sector is also a partner in the effort.

Program assessments are based on the Uniform Guidelines for State Highway Safety Programs which are required by Congress and periodically updated through a public review process. For each highway safety program area, the criteria against which each State program is assessed was developed through use of these uniform guidelines, augmented by current best practices.

NHTSA staff facilitates the assessment process by assembling an assessment team to review all components of given highway safety or EMS program, note the program's strengths and accomplishments, and note where improvements can be made. The team comprises individuals who have demonstrated competence in the various components of the specific highway safety program area for which the assessment is held.

The State of Kentucky voluntarily requested NHTSA's assistance in assessing their State's pedestrian and bicyclist safety program. This resulting assessment report reflects the Team's findings based on the *Uniform Guidelines for State Highway Safety Programs, Highway Safety Program Guideline No. 14 Pedestrian and Bicycle Safety (2006)*. Recognizing the importance of emergency medical services (EMS) as a critical component to addressing traffic safety, the Team added a section focused on EMS. The Team conducted the Kentucky Pedestrian and Bicycle Safety Program Assessment from 09/22/2021 to 03/09/2022.





## Organization of Report

The report is structured to allow for a quick review of the assessment results. The Team’s priority recommendations precede the summary results of each component area: Program Management, Education, Enforcement, Engineering, and Emergency Medical Services. The summaries are the Team’s findings in response to questions in the Pedestrian and Bicyclist Safety Program Technical System Advisory and corresponding to the *Uniform Guidelines for State Highway Safety Programs, Highway Safety Program Guideline No. 14 Pedestrian and Bicycle Safety (2006)* as well as reflecting current best practices.





## Priority Recommendations

### Program Management

- Appoint a Coordinator or Program Manager that is charged with the development of a Pedestrian and Bicycle Strategic Safety Plan and a Pedestrian and Bicycle Safety Coalition. The Pedestrian and Bicycle Safety Coalition should be made up of a diverse group of state and local partners, stakeholders, and safety advocates and should be charged with the implementation of the countermeasures identified in the plan. The people included in the assessment interviews would be a great place to start in considering potential coalition members.
- Develop a stand-alone pedestrian and bicycle strategic safety plan that supports both the SHSP and the HSP. The pedestrian and bicycle strategic safety plan should be based on problem identification and provide guidance in development and implementation of education, enforcement, engineering, and emergency medical services proven effective countermeasures to enhance the safety of people who walk and bike.
- Utilize the Highway Safety Improvement Plan (HSIP) and Highway Safety Plan (HSP) to better support efforts to improve the safety of pedestrians and bicyclists at both the state and local level. Better communicating the availability of grant funding to local partners would be a good starting point for this effort. The KOHS should conduct an analysis of all crashes and determine what percentage of fatal and serious injuries are bicyclists and pedestrians, then apply that percentage of funding to projects that specifically address these crashes. There should be evaluation measures and methods included in each new project that is developed and should also be used to determine the level of progress and success of current projects. Consider utilizing NHTSA's Art of Appropriate Evaluation, AASHTO's Highway Safety Manual (HSM) and other effective evaluation tools to ensure that projects are accomplishing the goals they were put into place to accomplish.
- Develop a Pedestrian and Bicycle Strategic Safety Coalition that is charged with implementation of the Pedestrian and Bicycle strategic Safety Plan. It may be possible to expand and rebrand the Kentucky Bicycle and Bikeways Commission to include pedestrians. Possibly rename it the Kentucky Active Transportation Commission. It's imperative that this group include state, regional, and local partners, stakeholders, and advocacy groups.
- Partner with law enforcement agencies, DMV, EMS and Trauma partners at the state and local level to develop a data warehouse that includes GIS mapping, identifies contributing factors in serious and fatal injury crashes, identifies the context of the community where the crashes are occurring such as areas of concern or areas with visually impaired pedestrians, the ages of people involved in the crashes, the time of day and day of week the crashes are occurring, and any cultural or language barriers that may be involved.

Equity and Accessibility: Track the demographics of who Kentucky is engaging with when doing community outreach, with the intention of understanding what communities are not being reached and developing more targeted approaches to address that gap.





## Education

- Kentucky's bicyclist and pedestrian safety education and outreach efforts should be based on creating a crash-data focused communications plan that includes target audiences for bicyclists, pedestrians, and motorists as well as key messages for each. In the absence of a designated lead agency, the Kentucky Highway Safety Office's new vulnerable roadway user program manager is an ideal candidate to lead this effort that should include input from state and local stakeholders, making sure to include non-traditional and multicultural partners in its development and implementation.
- Conduct crash data analysis for both bicyclist and pedestrian safety that provides clear and easy-to-understand problem identification for the bicyclist, pedestrian, and motorist, and use this information to develop education and communication programs, including enforcement communications when and where it may be appropriate.
- Include engineering-based bicyclist and pedestrian safety applications into communications planning so that roadway users understand how to safely navigate as a driver, bicyclist, and/or pedestrian.
- **Equity and Accessibility:** Actively recruit members of the disability community, immigrant communities, low-income workers and youth who rely on active transportation to attend public meetings, workgroups, committees, etc. so they can actively engage in the planning process. This could help build connections between advocates and communities that are likely to be disproportionately represented in pedestrian and bicyclist deaths and serious injuries. Consider providing stipends, childcare, meals, transportation to underserved and people with mobility challenges ensure that communities that are often unable to participate in workgroups/committees have more equitable access.

## Enforcement

- Develop a law enforcement policy supporting both pedestrian and bicyclist safety.
- Identify and/or cultivate an in-state law enforcement expert surrounding bicycle and pedestrian safety.
- Institute a statewide method and timeline of communication to share bicyclist and pedestrian safety information (e.g., newsletters, training bulletins, roll call videos, and on-line training modules).
- Incorporate bicyclist and pedestrian scenario training into law enforcement field training and evaluation programs (recruit training).
- Reevaluate if bicyclist and pedestrian crash data supports enforcement efforts focusing on driver violations involving cellular phones, DUI enforcement in high pedestrian crash corridors, a the three-stage process of education, warning, and citing violators.
- Once the evaluation has been completed, develop an action plan to both implement enforcement measures for reevaluation and adjustment (if necessary).
- Emphasize behavioral highway safety efforts.
- Utilize data to drive law enforcement education and enforcement efforts.
- Prioritize High Visibility Enforcement and Engagement specific to bicyclists and pedestrians and







report activities to the Office of Highway Safety.

- Require Law Enforcement Liaisons to take more of an active role with coordinating High Visibility Enforcement/Engagement campaigns and related training.
- Appoint the in-state law enforcement expert onto the Vulnerable Road User Task Force.
- Encourage traffic law enforcement professionals to partner with local roadway engineers as part of the problem identification process.
- Support the in-state law enforcement expert surrounding bicyclist and pedestrian safety to work with the Kentucky Association of Chiefs of Police and Kentucky Sheriffs' Association Legislative Committees to enhance automated enforcement technologies.
- Appoint the Traffic Safety Resource Prosecutor to the Vulnerable Roadway User Task Force.
- Appoint Biking/Walking advocacy groups to the Vulnerable Roadway User Task Force.
- Develop a bicyclist and pedestrian training curriculum authored under a collaborative approach including advocacy, engineering, and law enforcement.
- Prioritize bicyclist and pedestrian safety materials for law enforcement to distribute during High Visibility Enforcement campaigns and community safety events.
- Develop, through the Vulnerable Roadway User Task Force, a program to recognize law enforcement for exemplary achievements in addressing bicyclist and pedestrian safety.

## Engineering

- **Make the Pedestrian and Bicycle Coordinator a higher-level engineering position to provide more stability in the position and program, and increase the bicycle/pedestrian program budget**
- Create a program to collect pedestrian & bicycle count/exposure information program to evaluate nonmotorized system needs.
- **Revise the Highway Design Manual for improved pedestrian and bicycle facilities when updating the 2002 Pedestrian and Bicycle Travel Policy to provide more stringent requirements to provide pedestrian and bicycle facilities and instead make it a design exception to not provide facilities for pedestrians and bicyclists.**
- Explore additional Engineering countermeasures for pedestrians and bicyclists such as Pedestrian Hybrid Beacons (formerly known as HAWKs) on the state highway system for safer crossings of busy/wide, higher speed streets; and the use of Flashing Yellow Arrows to call a protected left-turn phase across a conflicting crosswalk when a pedestrian actuation occurs on a cycle-by-cycle basis where left turn phasing exists and conflicts between left-turning vehicles and pedestrians occur. Provide APS pushbuttons when LPI is installed at traffic signals (along with No Turn On Red signs.) Explore the use of protected bike lane facilities.
- Explore the development of a Safe Routes to Transit educational plan and conduct safety studies for crossing countermeasures at transit crossings at non-signal locations. Many pedestrian crashes involve crossing to and from transit, yet the link between pedestrian crashes and transit is not well known. This link should be explored.
- Work with and encourage local agencies to adopt a Complete Streets policy once the state policy is





finalized and adopted, targeting primarily the urban areas. At the same time rural areas should not be ignored for complete street opportunities, especially for new or retrofit projects.

- **Equity and Accessibility:** Increase focus on walking and rolling access for students. Not every family has reliable access to a vehicle and can provide transportation, and by making it safe and possible for children to transport themselves to school, Kentucky would not only encourage the development of safe walking, rolling and biking habits, it would allow children who may not otherwise be able to participate in afterschool activities because of lack of transportation, the ability to do so.
- **Equity and Accessibility:** Continue to coordinate with local jurisdictions to support their transition plans to ensure they are also moving actively towards ADA compliance in the public right of way.
- **Equity and Accessibility:** Conduct an analysis similar to the work in Washington DC to understand the equity implications of where crashes are going unreported, and to adjust resource allocation as needed based on the findings of this research.

Another option could be a pilot similar to the “near miss” study conducted through traffic cameras in Bellevue, Washington that measures where collisions and near misses occur through AI analysis of traffic camera footage, though this approach does require a network of traffic monitoring cameras at intersections. <https://www.togetherforsaferroads.org/transformational-analytics/>

- **Equity and Accessibility:** Track and analyze additional demographic data of the crash victims and of the census block areas where the crashes occur to understand and begin to address systemic inequities that can be revealed with this more complete analysis.  
Analyze bike/walk/drive categories to think about how users with different identities, abilities and access to resources can feel safe and comfortable using different modes in the transportation system.

### Emergency Medical Services

- Establish an EMS plan that includes trauma, injury prevention, data sharing, public education or other goals and objectives relevant to pedestrian and bicycle safety.
- Engage the Kentucky Injury Prevention and Research Center to establish a focus on bicycle and pedestrian injuries as a way of informing planning, enforcement, infrastructure, and EMS in their efforts to eliminate these injuries. Invest in their ability to combine all of the relevant data systems.
- Identify forums where local EMS agencies can come together with their counterparts in law enforcement, infrastructure, user groups, and other stakeholders to participate in planning, education and other steps to improve bicycle and pedestrian safety. This could be during road safety audits, through the Kentucky Injury Prevention Research Center, as part of a periodic Lifesavers Conference or some other mechanism.





## Assessment Results

### Program Management

#### Summary

It's imperative that the Kentucky Office of Highway Safety (KOHS) provide dedicated funding to allow for predictable planning as well as demonstrating its commitment to the safety of people who walk and bike. The KOHS has a Strategic Highway Safety Plan (SHSP), Highway Safety Plan (HSP), and Highway Safety Improvement Plan (HSIP) in place that provides a framework for **developing a Pedestrian and Bicycle Strategic Safety Plan**. Development of this plan should start with a comprehensive data analysis to identify crash types and contributing factors, and target audiences. This information should be used to identify specific goals and objectives that integrate engineering, education, enforcement, and emergency medical services (EMS) in a coordinated, comprehensive approach to problem resolution. The plan should be developed in collaboration with state, regional, and local partners, stakeholders, and safety advocates, which can be formed into a statewide coalition or council that is charged with implementation. Building on the foundation that has been established by the Kentucky Bicycle and Bikeways Commission would be a good starting point for coalition building. Add in state, regional, and local partners with a vested interest in pedestrian safety to round out the team. A comprehensive communications strategy in key to informing and engaging coalition members, potential new partners, grantees stakeholders, and safety advocates throughout the process. **The Pedestrian and Bicycle Strategic Safety Plan should serve as the "action plan" for the Vulnerable Road Users Emphasis Area of the SHSP, HSP, and HSIP.**

#### Recommendations

- **Appoint a Coordinator or Program Manager that is charged with development of a Pedestrian and Bicycle Strategic Safety Plan and a Pedestrian and Bicycle Safety Coalition. The Pedestrian and Bicycle Safety Coalition should be made up of a diverse group of state and local partners, stakeholders, and safety advocates and should be charged with implementation of the countermeasures identified in the plan. The people included in the assessment interviews would be a great place to start in considering potential coalition members.**
- **Develop a stand-alone pedestrian and bicycle strategic safety plan that supports both the SHSP and the HSP. The pedestrian and bicycle strategic safety plan should be based on problem identification and provide guidance in development and implementation of education, enforcement, engineering, and emergency medical services proven effective countermeasures to enhance the safety of people who walk and bike.**
- **Utilize the Highway Safety Improvement Plan (HSIP) and Highway Safety Plan (HSP) to better support efforts to improve the safety of pedestrians and bicyclists at both the state and local level. Better communicating the availability of grant funding to local partners would be a good starting point for this effort. The KOHS should conduct an analysis of all crashes and determine what percentage of fatal and serious injuries are bicyclists and pedestrians, then apply that percentage of funding to projects that specifically address these crashes. There should be evaluation measures**





and methods included in each new project that is developed and should also be used to determine the level of progress and success of current projects. Consider utilizing NHTSA's Art of Appropriate Evaluation, AASHTO's Highway Safety Manual (HSM) and other effective evaluation tools to ensure that projects are accomplishing the goals they were put into place to accomplish.

- **Develop a Pedestrian and Bicycle Strategic Safety Coalition that is charged with implementation of the Pedestrian and Bicycle strategic Safety Plan. It may be possible to expand and rebrand the Kentucky Bicycle and Bikeways Commission to include pedestrians. Possibly rename it the Kentucky Active Transportation Commission. It's imperative that this group include state, regional, and local partners, stakeholders, and advocacy groups.**
- **Partner with law enforcement agencies, DMV, EMS and Trauma partners at the state and local level to develop a data warehouse that includes GIS mapping, identifies contributing factors in serious and fatal injury crashes, identifies the context of the community where the crashes are occurring such as areas of concern or areas with visually impaired pedestrians, the ages of people involved in the crashes, the time of day and day of week the crashes are occurring, and any cultural or language barriers that may be involved.**

**Equity and Accessibility: Track the demographics of who Kentucky is engaging with when doing community outreach, with the intention of understanding what communities are not being reached and developing more targeted approaches to address that gap.**

- Implement a robust communication plan as part of it's pedestrian and bicycle strategic safety plan. that this plan contains information pertaining to technological advances, and that this plan be disseminated to all state and local partners, stakeholders, advocacy groups, grantees, potential grantees, and anyone with a vested interest in safety.
- Modify the grant training currently provided to grantees to include state, regional, and local partners with a vested interest in safety. It should include technical assistance on the grant application process, program management, problem identification, and proven effective countermeasures. This provides an opportunity to expand the grant funded pedestrian and bicycle safety program to be a better representation of the state as a whole.
- Communicate funding information to all state and local partners including law enforcement, educators, and emergency medical services partners and technical assistance provided through the grant application process. To accomplish this, the KOHS might consider provide a series of meetings or roundtables across the state to encourage potential grantees to attend and learn more about the Highway Safety Grant Program. It would be helpful to provide resources such as sample applications, pre established problem identification for each area the meetings are conducted in, and the types of technical assistance that can be provided to grantees. Communication is key to encouraging new partnerships to help advance the statewide initiative.

## Education

### Summary

A well-rounded and effective bicyclist and pedestrian safety program includes a strong communications





and outreach component. Kentucky is poised to begin building a robust and comprehensive communications plan to address bicyclist and pedestrian safety at the state and local levels. This will require data analysis that makes clear the state's crash picture for bicyclists, pedestrians, and motorists. This is especially needed for the Strategic Highway Safety Plan's (SHSP) vulnerable roadway user emphasis area. While there is logic in a vulnerable roadway user emphasis area, data must also look at motorcycle, bicycle, and pedestrian crashes individually for developing plans, setting objectives, and reviewing progress as it pertains to the SHSP as well as the new communications and outreach plan.

Education efforts are already well underway with new bicyclist and pedestrian safety campaigns developed by the Kentucky Highway Safety Office. These paid advertising campaigns are supported by state funds and incorporate a well-rounded variety of channels that reflect the digital nature of today's communications landscape. Communications efforts also include news releases as well as owned social media channels and freeway digital message boards. The new bicyclist and pedestrian safety campaign recently won an award from the American Advertising Federation - Louisville chapter. These assets will soon be easily viewed and shared through web pages that are in development and will to support education and communication. Crash data info-graphics would further enhance these new web-based resources.

As Kentucky builds out its staffing support for bicyclist and pedestrian safety with a new vulnerable roadway user program manager, this position will be a key resource for bringing together state-level and local stakeholders so that communications efforts are coordinated and leverage each group's social media channels, websites, newsletters, and other communication vehicles. This process will likely be assisted by the newly formed Bike Walk Kentucky group. While many states have groups that advocate for bicyclist safety, the same is not always true for pedestrians. As this new group of stakeholders is formed, it should also include nontraditional and multicultural members to ensure the plan is inclusive of and reflects all people in the state as well as the intricacies and of bicyclist and pedestrian safety efforts. Unlike other safety programs that focus only on (licensed) motorists, bicyclist and pedestrian safety must take into account the unique and varied nature of bicyclists and pedestrians.

The new stakeholder group can also be a key resource should Kentucky begin implementing data-based enforcement efforts. It will be important that law enforcement agencies understand perspectives and concerns of bicyclists and pedestrians. Input and guidance from local groups can help shape enforcement efforts so that they are thoughtful, well communicated, and effective.

As part of longer-range plans, safety communications should seek to incorporate bicyclist and pedestrian modules into a model driver's training program for novice drivers. New drivers should understand how to drive safely around pedestrians and bicyclists, understand their rights and responsibilities, and appropriate driver actions at intersections, crosswalks, HAWK signals, and bike lanes. This could include providing materials, information, and interactive learning games for drivers' training programs and instructors to use with their students.





## Recommendations

- **Kentucky's bicyclist and pedestrian safety education and outreach efforts should be based on creating a crash-data focused communications plan that includes target audiences for bicyclists, pedestrians, and motorists as well as key messages for each. In the absence of a designated lead agency, the Kentucky Highway Safety Office's new vulnerable roadway user program manager is an ideal candidate to lead this effort that should include input from state and local stakeholders, making sure to include non-traditional and multicultural partners in its development and implementation.**
- **Conduct crash data analysis for both bicyclist and pedestrian safety that provides clear and easy-to-understand problem identification for the bicyclist, pedestrian, and motorist, and use this information to develop education and communication programs, including enforcement communications when and where it may be appropriate.**
- **Include engineering-based bicyclist and pedestrian safety applications into communications planning so that roadway users understand how to safely navigate as a driver, bicyclist, and/or pedestrian.**
- **Equity and Accessibility: Actively recruit members of the disability community, immigrant communities, low-income workers and youth who rely on active transportation to attend public meetings, workgroups, committees, etc. so they can actively engage in the planning process. This could help build connections between advocates and communities that are likely to be disproportionately represented in pedestrians and bicyclist deaths and serious injuries. Consider providing stipends, childcare, meals, transportation to underserved and people with mobility challenges ensure that communities that are often unable to participate in workgroups/committees have more equitable access.**
- Build on efforts that involve businesses in bicycle safety training and education efforts to also include pedestrian safety training and education for their employees.
- Ensure communications planning, development, and implementation for bicyclist and pedestrian takes into account the need to be multicultural and multilingual to reflect the diversity of Kentucky's population.
- Develop learning-based bicyclist and pedestrian safety training and information for driver's education students and instructors. New drivers should understand how to drive safely around pedestrians and bicyclists, understand bicyclist and pedestrian rights and responsibilities, and appropriate driver actions at intersections, crosswalks, HAWK signals, and bike lanes.
- **Equity and Accessibility: Continue to build relationships with disability advocacy organizations and service providers to ensure that individuals who have accessibility needs know how to make requests for improvements.**

## Enforcement

### Summary

The goal of Law enforcement is to support the State's Pedestrian and Bicyclist Safety Program (PBSP) by understanding, investigating, and documenting the pedestrian and bicyclist crash problem. Kentucky has





approximately 389 police agencies, in 120 counties, with around 8,000 law enforcement officers which serve a population of just under 5 million people. Kentucky law enforcement is challenged regarding the enforcement of vulnerable roadway user violations. Although this presents significant leadership and operational challenges, it does provide an opportunity to build professional relationships; educate and train stakeholders; and positively engage decision-makers to reduce serious injury and fatal pedestrian and bicyclist incidents. This must be a collective objective by all interested parties.

In terms of related statutes and laws, the State trains law enforcement in pedestrian and bicyclist safety. This is primarily done during academy training. Other than specific collision reconstruction or bicycle patrol training, there was no evidence to indicate law enforcement officers receive any additional bicycle or pedestrian training once academy completion. Moreover, bicyclist and pedestrian safety scenarios are not incorporated into the recruit's field training and evaluation process.

Regarding collision investigation training, the State has a comprehensive collision reconstruction program with more than 100 collision reconstructionists. Furthermore, all State Troopers receive 40-hours of basic collision investigation training—more than any other agency.

In addition to the lack of on-going bicyclist and pedestrian training, the State does not routinely participate in High Visibility Enforcement or Engagement efforts specific to bicyclists or pedestrians. Law enforcement staffing levels and funding were mentioned as barriers to effective bicyclist and pedestrian enforcement efforts. Anecdotally, a few agencies reported participating in DUI enforcement in high bicyclist or pedestrian “hot spots,” however, no tactical or operational plans as well as the results of such activities were provided.

The State reported heavy infrastructure traffic safety involvement but very little behavioral traffic safety engagement. This was evident by the lack of program management collaboration among the highway safety office; law enforcement; non-governmental agencies, and advocacy groups. Infrastructure improvements will not solve bicyclist and pedestrian incidents alone.

Kentucky law enforcement, like many other jurisdictions across the country, are plagued with full-time vacancies and other competing interests. Those that participated in the assessment understand the current political and social climates surrounding “enforcement,” and made it clear that reducing these incidents were a priority in their respective agencies.

The State's Bicycle and Pedestrian Program is in its infancy and there appears to be tremendous support to build an equitable and comprehensive program. Law enforcement must have an in-state bicyclist and pedestrian expert working closely with the Office of Highway Safety, Vulnerable Roadway User Task Force, Traffic Safety Resource Prosecutor, Law Enforcement Liaisons, State Police, and both the Sheriffs' and Police Chief Associations to further training, education, and enforcement. Similarly, the State must recognize those doing the important work surrounding bicyclists and pedestrians.





## Recommendations

- **Develop a law enforcement policy supporting both pedestrian and bicyclist safety.**
- **Identify and/or cultivate an in-state law enforcement expert surrounding bicycle and pedestrian safety.**
- **Institute a statewide method and timeline of communication to share bicyclist and pedestrian safety information (e.g., newsletters, training bulletins, roll call videos, and on-line training modules).**
- **Incorporate bicyclist and pedestrian scenario training into law enforcement field training and evaluation programs (recruit training).**
- **Reevaluate if bicyclist and pedestrian crash data supports enforcement efforts focusing on driver violations involving cellular phones, DUI enforcement in high pedestrian crash corridors, and the three-stage process of education, warning, and citing violators.**
- **Once the evaluation has been completed, develop an action plan to both implement enforcement measures for reevaluation and adjustment (if necessary).**
- **Emphasize behavioral highway safety efforts.**
- **Utilize data to drive law enforcement education and enforcement efforts.**
- **Prioritize High Visibility Enforcement and Engagement specific to bicyclists and pedestrians and report activities to the Office of Highway Safety.**
- **Require Law Enforcement Liaisons to take more of an active role with coordinating High Visibility Enforcement/Engagement campaigns and related training.**
- **Appoint the in-state law enforcement expert onto the Vulnerable Road User Task Force.**
- **Encourage traffic law enforcement professionals to partner with local roadway engineers as part of the problem identification process.**
- **Support the in-state law enforcement expert surrounding bicyclist and pedestrian safety to work with the Kentucky Association of Chiefs of Police and Kentucky Sheriffs' Association Legislative Committees to enhance automated enforcement technologies.**
- **Appoint the Traffic Safety Resource Prosecutor to the Vulnerable Roadway User Task Force.**
- **Appoint Biking/Walking advocacy groups to the Vulnerable Roadway User Task Force.**
- **Develop a bicyclist and pedestrian training curriculum authored under a collaborative approach including advocacy, engineering, and law enforcement.**
- **Prioritize bicyclist and pedestrian safety materials for law enforcement to distribute during High Visibility Enforcement campaigns and community safety events.**
- **Develop, through the Vulnerable Roadway User Task Force, a program to recognize law enforcement for exemplary achievements in addressing bicyclist and pedestrian safety.**
- **Encourage the Vulnerable Roadway User Task Force to partner with a university to pilot a bicyclist and/or pedestrian ticket diversion program.**







## Engineering

### Summary

There are a number of items that Kentucky is doing well with respect to providing safe facilities for pedestrians and bicyclists. It is clear that the Kentucky Transportation Cabinet staff is concerned about pedestrian and bicycle safety, and local agency representatives from major urban areas indicated that they are committed to improving conditions for pedestrians and bicyclists. Some of the major accomplishments include: (1) Completing the Kentucky 2020-2024 SAFE KY Strategic Highway Safety Plan (SHSP) which created a Vulnerable Road User (VRU) Emphasis Area that includes Pedestrians and Bicycles (in addition to motorcycles); (2) Actively seeking a VRU Coordinator for non-infrastructure countermeasures; (3) Updating the ADA Transition Plan in 2021, which is actively being pursued; (4) Developing the Kentucky STEP – Safety Action Plan for Implementing Countermeasures in December 2020, which mirrors the FHWA STEP Manual; (5) Actively working on a Complete Streets Policy, which is expected to be completed by the end of 2022; and (6) Developing and publishing a Public Involvement Process for Statewide Transportation Planning and Project Delivery in 2020 that appears to be working well for public input into projects.

It is a positive step that the Pedestrian and Bicycle Coordinator position is an engineering position which provides more weight in the design process, but the position should be elevated for the program stability and overall authority in design decisions and program management. The program budget should also be increased to provide for greater safety benefit throughout the state.

Kentucky has a strong Local Technical Assistance Program (LTAP) at the University of Kentucky (Kentucky Transportation Center), which serves as the research arm for the KYTC. Kentucky also developed a CMF Search Tool to identify the more relevant CMFs for benefit/cost evaluation tool. Some of the other suggested improvements include developing a strong pedestrian and bicycle count program to provide exposure data for the planning and evaluation programs across the state. A program to explore the development of this program is under study and should be completed by the end of the year. Additionally, there is a need to review the Highway Design Manual for improved pedestrian and bicycle facilities and countermeasures. There is a need to update the 2002 Pedestrian and Bicycle Travel Policy to have more stringent requirements to provide pedestrian and bicycle facilities. Instead of making pedestrian and bicycle facilities a "consideration", the absence of such facilities in new or retrofit projects should be a design exception. There needs to be studies to explore the linkage between pedestrian (and bicycle) crashes and transit usage. Often pedestrian crossings (and the subsequent crossing crashes) are the result of a need to access transit. Safe Routes to Transit evaluations and safety programs would help to make these trips more safely and identify challenging crossing conditions to address.

### Recommendations

- **Make the Pedestrian and Bicycle Coordinator a higher-level engineering position to provide more stability in the position and program, and increase the bicycle/pedestrian program budget**
- **Create a program to collect pedestrian & bicycle count/exposure information program to evaluate nonmotorized system needs.**





- **Revise the Highway Design Manual for improved pedestrian and bicycle facilities when updating the 2002 Pedestrian and Bicycle Travel Policy to provide more stringent requirements to provide pedestrian and bicycle facilities and instead make it a design exception to not provide facilities for pedestrians and bicyclists.**
- **Explore additional Engineering countermeasures for pedestrians and bicyclists such as Pedestrian Hybrid Beacons (formerly known as HAWKs) on the state highway system for safer crossings of busy/wide, higher speed streets; and the use of Flashing Yellow Arrows to call a protected left-turn phase across a conflicting crosswalk when a pedestrian actuation occurs on a cycle-by-cycle basis where left turn phasing exists and conflicts between left-turning vehicles and pedestrians occur. Provide APS pushbuttons when LPI is installed at traffic signals (along with No Turn On Red signs.) Explore the use of protected bike lane facilities.**
- **Explore the development of a Safe Routes to Transit educational plan and conduct safety studies for crossing countermeasures at transit crossings at non-signal locations. Many pedestrian crashes involve crossing to and from transit, yet the link between pedestrian crashes and transit is not well known. This link should be explored.**
- **Work with and encourage local agencies to adopt a Complete Streets policy once the state policy is finalized and adopted, targeting primarily the urban areas. At the same time rural areas should not be ignored for complete street opportunities, especially for new or retrofit projects.**
- **Equity and Accessibility: Increase focus on walking and rolling access for students. Not every family has reliable access to a vehicle and can provide transportation, and by making it safe and possible for children to transport themselves to school, Kentucky would not only encourage the development of safe walking, rolling and biking habits, it would allow children who may not otherwise be able to participate in afterschool activities because of lack of transportation, the ability to do so.**
- **Equity and Accessibility: Continue to coordinate with local jurisdictions to support their transition plans to ensure they are also moving actively towards ADA compliance in the public right of way.**
- **Equity and Accessibility: Conduct an analysis similar to the work in Washington DC to understand the equity implications of where crashes are going unreported, and to adjust resource allocation as needed based on the findings of this research.**  
Another option could be a pilot similar to the “near miss” study conducted through traffic cameras in Bellevue, Washington that measures where collisions and near misses occur through AI analysis of traffic camera footage, though this approach does require a network of traffic monitoring cameras at intersections. <https://www.togetherforsaferroads.org/transformational-analytics/>
- **Equity and Accessibility: Track and analyze additional demographic data of the crash victims and of the census block areas where the crashes occur to understand and begin to address systemic inequities that can be revealed with this more complete analysis.**  
**Analyze bike/walk/drive categories to think about how users with different identities, abilities and access to resources can feel safe and comfortable using different modes in the transportation system.**
- **Explore the reporting practices of minor or non-injury pedestrian and bicycle crashes throughout the state since these may not be consistently reported. It would be desirable to conduct a study to**





identify how many and where these are occurring to obtain a complete crash picture for pedestrian bicycle crashes. This may be an ideal LTAP research project.

- Be prepared for the possible adoption of PROWAG in 2022, (the primary issue may be the use of APS pushbuttons at traffic signals) as well as the next editions of the AASHTO Bike Design Guide, and the AASHTO Pedestrian Guide for the Planning, Design and Operation of Pedestrian Facilities, as well as and the next edition of the MUTCD, which may result in changes to the Kentucky Highway Design Manual and operational procedures.
- **Equity and Accessibility:** Collect more detailed demographic data on the mobility needs and demographics of nondrivers, who are most likely to be walking/rolling/biking in places that lack safe or developed pedestrian and bike infrastructure. Many conversations emphasized that Kentucky is a very rural state, but it is critical to understand the mobility needs of rural residents as well, especially those who may not have access to a car or driving.
- **Equity and Accessibility:** Continue employment DEI work to ensure there are pathways for women and minorities to not only be hired and retained, but to become part of leadership and decision-making bodies.
- **Equity and Accessibility:** Support Lexington in their work towards adopting a complete streets policy, and ensure the policy includes an environmental justice analysis so that gaps in existing infrastructure and unsafe road conditions can be understood in the context of historic under-investments, and that resources will be allocated to prioritize addressing these inequities.
- **Equity and Accessibility:** Formalize a way to include latent demand measurements in planning and prioritization to go beyond who is currently using the system with bike/ped counts to who would want to use active transportation if they felt safe and comfortable doing so.

## Emergency Medical Services

### Summary

Kentucky's EMS system has made some impressive strides over a number of years that enable it to serve not only persons injured in bicycle and pedestrian events but the broad spectrum of other injury and medical cases. The Kentucky Board of EMS is using all national standards for EMS education and licensing. There is a NEMSIS compliant information system. The Commonwealth has full enhanced 911 coverage today and is making logical progress towards NG 911. Included in the statewide EMS protocol package is an excellent example of one for putting safety first in EMS transports. Kentucky's healthcare system, including EMS, has been challenged by the COVID 19 pandemic. COVID has consumed state resources which has limited their involvements in bicycle and pedestrian safety initiatives. It has also stretched local EMS agency personnel who have given priority to emergency response activities. There are opportunities for EMS to play important roles in helping move towards the elimination of bicycle and pedestrian injuries or deaths. The most likely places where EMS can advance are through engagement and information sharing. Bringing together EMS with law enforcement, engineering, educators, user groups and policy makers creates a powerful team that can identify solutions that make sense. Combining EMS, trauma registry, crash data, hospital discharge data and death certificate data creates a more complete picture for understanding of how bicycle and pedestrian injuries are harming not just the people injured but their families, employers, and the state's economy.





## Recommendations

- **Establish an EMS plan that includes trauma, injury prevention, data sharing, public education or other goals and objectives relevant to pedestrian and bicycle safety.**
- **Engage the Kentucky Injury Prevention and Research Center to establish a focus on bicycle and pedestrian injuries as a way of informing planning, enforcement, infrastructure, and EMS in their efforts to eliminate these injuries. Invest in their ability to combine all of the relevant data systems.**
- **Identify forums where local EMS agencies can come together with their counterparts in law enforcement, infrastructure, user groups, and other stakeholders to participate in planning, education and other steps to improve bicycle and pedestrian safety. This could be during road safety audits, through the Kentucky Injury Prevention Research Center, as part of a periodic Lifesavers Conference or some other mechanism.**
- Continue the efforts already in progress to complete implementation of NG 911 capabilities.
- Assess entering the EMS Compact as an expedited means of sharing EMS personnel across state borders.
- Establish automated reports from the KSTARS system for EMS personnel, their employer agencies, and medical directors that give feedback about trauma and injury care including bicycle and pedestrian related injuries.
- Continue efforts to integrate KSTARS EMS data with trauma registry data to give the most complete picture of trauma care within Kentucky.
- Identify a bystander care training program that can be deployed for statewide use by EMS agencies, law enforcement, fire departments, trauma centers and other stakeholders. As part of selecting and distributing a bystander care training program, identify a way to monitor how often courses are taught, where, and to how many people. The Kentucky trauma centers and Kentucky Highway Safety Office may be able to support this step financially and with other resources.
- The Kentucky legislature should be encouraged to pass legislation that exempts all persons who voluntarily attempt to assist with trauma or medical emergencies from liability associated with adverse outcomes.
- Assure the integration of AACN technologies with ongoing efforts to implement NG 911 capabilities.
- Integrate crash/injury reporting into any future implementation of street level cameras for other traffic control or related purposes.
- Identify and publicize the ways EMS personnel and agencies can participate in traffic safety education. Encourage local linkages with school and community based programs. Build a simple reporting mechanism so information about where, how often and how many people have been touched by these trainings can be centrally collected and reported.
- Use the KSTARS information system to produce an annual report on backcountry EMS responses. Look particularly at response times and where the resources came from to identify where new capabilities should be located and confirm that off road bicycle and pedestrian injuries are receiving timely and appropriate care.
- Establish an annual recognition program for EMS personnel that can be used to recognize





contributions to bicycle and pedestrian safety. Try to go beyond a one time event and structure a program that enables and encourages other EMS personnel to replicate or adapt whatever the persons being recognized are doing





## Appendix A - Questions, Status and Conclusions

### Status Definitions

- **Current Practice** (defined as: State fully meets the objective of this question)
- **In Development** (defined as: State is actively in the process of implementing the objective of this question, or has partially achieved the question's objective)
- **Under Consideration** (defined as: a documented proposal or plan for achieving this question's objective is being considered for implementation, but has not yet been approved and no action has been taken)
- **Not At This Time** (defined as: This question's objective has neither been implemented nor is it being considered for implementation. This also should be used for question objectives considered "not applicable" to the State.

### Program Management

#### 1. Does your State have a plan that describes its program to address pedestrian and bicyclist safety?

##### **Not At This Time**

Kentucky does not have a stand alone pedestrian and bicycle strategic safety plan. The SHSP includes pedestrians and bicyclists as a part of its vulnerable road user emphasis area, which also includes motorcycles, mopeds, and scooters. The HSP states that the KOHS's education branch will provide research and education designed to reduce fatalities and injuries on Kentucky's highways. This includes pedestrians and bicyclists.

While Kentucky does not appear to have an estimate for the percentage of the population that cannot drive and is therefore transit, paratransit, walking and rolling dependent, national data (cited in Louisville's Complete Street Policy) estimates that a third of the population does not have reliable access to driving for transportation. It was encouraging to hear agency staff in Kentucky starting to think about access for nondrivers, in particular to parks and open space, and regional trails like the Muir Trail project.

Specifically related to the ADA and access for disabled Kentuckians, Kentucky has an ADA Transition Plan updated in 2021 which includes a complete assessment of areas needing ADA improvements on the state right of way, and has committed to funding the \$6M needed to complete the plan. Impressively, this plan also includes a prioritization of ADA improvements, in coordination with disability advocates and looking at safe routes to transit and access to key services. The ADA transition improvements will be completed within 4-6 years, with three tiers





and priority based on community input and access to transit and other community resources. Kentucky does not have a backlog of requested ADA right of way improvements and when they receive a request, are able to move towards addressing that complaint in a matter of weeks.

## 2. Is the State's pedestrian and bicyclist safety program plan a component of another plan?

### Under Consideration

In the SHSP "Vulnerable Roadway Users" encompasses all non-motorized roadway users, such as pedestrians and bicyclists, in addition to motorcyclists, moped riders, and electric scooter riders. These varying types of roadway users are combined into one group here for the fact that all are at a significantly heightened risk of severe injury or death in the event of a collision with a motor vehicle. EMS, Education, and Engineering Strategies are as countermeasures supporting vulnerable road users.

The SHSP states that between 2014 and 2018, there were 866 fatalities involving vulnerable roadway users in Kentucky, which accounted for 23 percent of all highway fatalities. Of these 866 fatalities 417 were pedestrians and bicyclists. This equates to 49% of the total.

The HSP includes enhancing pedestrian and bicycle safety and public awareness of each through education, in order to reduce the overall pedestrian and bicycle crash and fatality rates in Kentucky.

It is recommended that the KOHS develop a stand alone pedestrian and bicycle strategic safety plan to advance the strategies listed in the SHSP and HSP, and to include proven effective countermeasures that comprehensively integrated education, enforcement, engineering and emergency medical services strategies to enhance the safety of people who walk and bike.

## 3. Does your State's Highway Safety Improvement Plan (HSIP) and Highway Safety Plan (HSP) include efforts that are aimed at reducing pedestrian and bicyclist injuries and fatalities?

### In Development

The HSIP considers the implementation and/or upgrade of pedestrian facilities on all projects and bicycle facilities are considered in the design phase. There are no targeted projects to address only pedestrian and bicycle safety, but, even though they are not called out separately, pedestrian and bicycle improvements are considered in all infrastructure improvements, RRR projects, and maintenance efforts.

The STIP reflects a \$12.5 million dollar allocation for bicycle, pedestrian and transportation alternative projects. There are also projects planned at the local level to improve the safety of people who walk and bike.

In the HSP, the Marshall County Health Department Occupant Protection Program includes pedestrian and bicycle components and the Kentucky Office of Highway Safety's Education Branch strategies and programs includes pedestrian and bicycle components.





It is recommended that the Highway Safety Improvement Plan (HSIP) and Highway Safety Plan (HSP) be utilized to better support efforts to improve the safety of pedestrians and bicyclists at both the state and local level. Better communicating the availability of grant funding to local partners and allocating the appropriate level of funding based on problem identification would be a good starting point for this effort.

**4. Is there a variety of funding resources used to adequately support efforts to reduce pedestrian and bicyclist crashes, injuries and fatalities?**

**Not At This Time**

At this time, there is very little evidence of funding that specifically addresses pedestrian and bicycle safety.

It is being recommended that the KOHS review the percentage of the problem and allocate the appropriate percentage of funding to improving the safety of pedestrians and bicyclists. Funding information should be communicated to all state and local partners including law enforcement, educators, and emergency medical services partners and technical assistance provided through the grant application process.

**5. Is there an existing statute or formal guidance that tasks a specific entity with leading and coordinating the effort to reduce pedestrian and bicyclist crashes, injuries and fatalities?**

**Current Practice**

In November 2007 the Secretary of the Transportation Cabinet was appointed as the Governor’s Representative for Highway Safety in Kentucky.

In June 2008, Kentucky’s State Highway Safety Office was reorganized by executive order from the Kentucky Office of Highway Safety in the Transportation Cabinet to the Office of Highway Safety in the Department of Highways in the Transportation Cabinet.

The administration of the federal 402 Highway Safety Program in Kentucky is housed in the Office’s Division of Highway Safety Programs.

There is also a Statewide Bicycle and Bikeways Program called out in statute - Kentucky Statute 174.120

It is recommended that the KOHS implement the Statewide Bicycle and Bikeways Program and enhance it through state and local partnerships.

It is also recommended that the State consider a similar statutory program addressing the safety of people who walk.







**6. Is there a statewide group of multidisciplinary stakeholders that works with the lead agency to develop, implement and evaluate the PBSP?**

The Kentucky Transportation Cabinet and Kentucky Bicycle and Bikeway Commission is currently serving in an advisory role, advocating for bicycle safety, however, there is no coalition or statewide group of advocates and stakeholders representing pedestrian and bicycle safety combined.

The state does not currently have a Pedestrian and Bicycle Strategic Safety Plan.

Equity and Accessibility: Conversations with advocates reveal that historically and in current practice bike advocates are better represented than pedestrian advocates. Additionally, people with more resources - both more flexible time and financial resources) tend to be more active in advocacy groups. It is time for both advocacy organizations and bike/pedestrian safety agency staff to start to intentionally work towards engaging with a broader and more representative population.

It is recommended that the state track the demographics of who Kentucky is engaging with when doing community outreach, with the intention of understanding what communities are not being reached and developing more targeted approaches to address that gap. Expand and rebrand KY Bicycle and Bikeways Commission to cover pedestrian access - for example could become the KY Active Transportation Commission. Actively recruit members of the disability community, immigrant communities, low-income workers and youth who rely on active transportation. This could help build connections between advocates and communities that are likely to be disproportionately represented in pedestrians and bicyclist deaths and serious injuries. Provide stipends, childcare, meals, transportation to ensure that communities that are often unable to participate in workgroups/committees have more equitable access. Increase focus on walking and rolling access for students. Not every family has reliable access to a vehicle and can provide transportation, and by making it safe and possible for children to transport themselves to school, Kentucky would not only encourage the development of safe walking, rolling and biking habits, it would allow children who may not otherwise be able to participate in afterschool activities because of lack of transportation, the ability to do so.

**7. Does the Pedestrian and Bicyclist Safety Program (PBSP) regularly communicate with stakeholders to inform them about the status of the PBSP, coordinate resources, and/or share best practices and other information?**

**Not At This Time**

The Kentucky Transportation Cabinet communicates with stakeholders via quarterly meetings and Cabinet website information, however, due to the pandemic, this hasn't happened as frequently.

There is currently no Pedestrian and Bicycle Strategic Safety Plan or communication plan specific to pedestrian and bicycle safety efforts.





**8. Does the lead agency and stakeholders group (if applicable) use data (e.g., crash, roadway, EMS, citation and adjudication) to identify the extent of the State’s pedestrian and bicyclist safety crash problem, clarifying the who, where, when, and why of crashes as well as the crash outcomes?**

**In Development**

The Kentucky Office of Highway Safety uses various data sources to identify the extent of the state's pedestrian and bicycle safety crash problems. There no formal crash mapping provided and no evidence of contributing factors being analyzed as part of the pedestrian/bicycle problem identification.

**9. Is the Pedestrian and Bicyclist Safety Plan re-evaluated and updated and is this information shared with stakeholders and/or the public?**

**Not At This Time**

The Kentucky Office of Highway Safety does not currently have a PBSSP in place. There is some communication between the KOHS and grant funded partners, but little is being communicated outside that core group.

**10. Does the State provide training and/or technical assistance on program management, problem identification, and countermeasures for stakeholders and grantees?**

**In Development**

The Kentucky Office of Highway Safety provides grantees training on program management, problem identification, and provides technical assistance specific to grant management. However, this training is only for grantees.

**11. Does the State evaluate funded safety programs, to include employing some measure of effectiveness?**

**Current Practice**

The Kentucky Office of Highway Safety establishes annual performance measures in the Highway Safety Plan and evaluates funded safety programs for effectiveness per their grant policy. However, there are very few projects within the HSP that impact pedestrian and bicycle safety.

**12. Does guidance exist for conducting program evaluation?**

**Current Practice**

The Kentucky Office of Highway Safety Grants Management Branch document HSP-103-2 explains the roles and responsibilities for the administration and monitoring of all programs funded by NHTSA.

**13. Does your State have laws and/or policies specifically addressing pedestrian and/or bicyclist safety?**

**Current Practice**

The State of Kentucky has laws and policies in place that specifically address pedestrian and





bicycle safety, and should continue to monitor the need for new or revised legislation to support the safety of people who walk and bike.

**14. Does the State monitor or assess the need for pedestrian and bicyclist safety legislation?**

**Current Practice**

The Kentucky Transportation Cabinet and Kentucky Bicycle and Bikeway Commission monitors, assesses and updates Kentucky laws and regulations pertaining to pedestrian/bicycle safety.

**15. Does the State inform stakeholders of the technological advances such as vehicle, infrastructure, and communications or mobile applications that may affect the safety of pedestrians and bicyclists?**

**Not At This Time**

The Kentucky Office of Highway Safety utilizes social and owned media to share information, however, there is very little information being shared about how technological advances such as vehicle, infrastructure, and communications or mobile applications may affect the safety of pedestrians and bicyclists.

**Education**

**16. Does your State have an education and public outreach (communications) plan focusing on bicyclist and pedestrian safety, which is included in a statewide traffic safety education and public outreach plan or another plan (e.g., Highway Safety Plan)?**

**Not At This Time**

Kentucky does not have an education and public outreach (communications) plan for bicyclist and pedestrian safety that is either included in a statewide traffic safety education and public outreach plan or another plan.

**17. Does the State Highway Safety Office or designated lead agency for pedestrian and bicyclist safety use data to develop, evaluate and update this communications plan, and how often is it evaluated and updated, and by whom?**

**Not At This Time**

Kentucky does not have a standalone communications and outreach plan for bicyclist and pedestrian safety. Further, there is no group or agency charged with this responsibility for the state.

**18. Are funding sources specifically used to implement the communication plan activities?**

**Current Practice**

Kentucky's state highway safety office does not have a standalone communications and outreach plan for bicyclist and pedestrian safety. Although there is no formal bicycle and pedestrian safety communications plan, state funding that has been used to develop paid advertising safety campaigns for these two issues. There are also funds available through the Paula Nye Memorial Education Grants for bicyclist and pedestrian safety annually. These funds are generated through purchase of special license plates and are awarded through the Kentucky





Bicycle and Bikeway Commission. The grants can be used for safety brochures, public awareness campaigns, and traffic education and enforcement in a specific target area.

**19. Is this communication plan implemented with the help of a multidisciplinary group of stakeholders that includes non-traditional and/or multicultural partners?**

**Not At This Time**

Kentucky does not yet have a standalone communications and outreach plan for bicyclist and pedestrian safety. However, some safety activities take place on the local level as evidenced by Safe Kids Fayette County which offers bike and pedestrian safety programs and events at the local level. Also, Norton Children's Hospital conducts bicycle safety rodeos at elementary schools that emphasize wearing a helmet and following the rules of the road. There is no evidence the state has yet engaged with multidisciplinary, multicultural, and non-traditional partners for communications planning and implementation.

**20. Does the pedestrian and bicyclist safety communications plan complement and support existing and planned traffic engineering activities that address pedestrian and bicyclist safety?**

**Not At This Time**

Kentucky does not have a standalone communications and outreach plan for bicyclist and pedestrian safety so there is no coordination with engineering activities focused on bicyclist and pedestrian safety.

**21. Does the pedestrian and bicyclist safety communication plan complement and support existing and planned high visibility pedestrian and bicyclist safety enforcement activities?**

**Not At This Time**

Kentucky does not have a standalone communications and outreach plan for bicyclist and pedestrian safety. At this time the state is not actively engaged with bicyclist and pedestrian safety traffic enforcement efforts.

**22. Do the State and/or other stakeholders use a variety of means to reach target audiences?**

**Current Practice**

The Kentucky Highway Safety Office uses a wide variety of channels to promote bicyclist and pedestrian safety messaging efforts. This includes streaming, digital, out of home, gas station pumps, radio, Facebook, Twitter, and Instagram, both promoted and organic posts.

Communication efforts also include news releases and using freeway electronic message signs when available and appropriate.

Other stakeholders also actively promote safety messaging. Safe Kids Fayette County conducts classroom presentations and rodeos and also takes part in Bike to School Day and Walk to School day activities.

The Lexington area metropolitan planning organization uses Facebook and Instagram to reach targeted audiences.





**23. Does the State promote or publicize its efforts and/or safety messages through donated (unpaid) advertisements (e.g. Public Service Announcements, print, billboards, bus shelters)?**

**Current Practice**

As part of its paid advertising campaign, the state received 1:1 bonus/matching spots from iheart radio at no charge.

**24. Does the State promote or publicize its efforts and/or safety messages through “earned media” (e.g., proactive mentions or messaging directly targeted to news media, blogs, retweets, Likes, newsletters or other non-directly controlled distributors)?**

**Current Practice**

The Kentucky highway safety office includes news releases as part of its communications efforts to promote bicyclist and pedestrian safety awareness through earned media channels.

**25. Does the State promote or publicize its efforts and/or safety messages through “owned media” (e.g., State and local agency operated websites, social media channels, mobile apps, blogs, brochures)?**

**Current Practice**

Kentucky uses a variety of state-owned media to share bicyclist and pedestrian traffic safety messages. These include the electronic message boards on freeways and social media channels including Facebook, Twitter, and Instagram. The highway safety office is currently building more robust web pages for bicyclist and pedestrian safety information.

**26. Does the State promote or publicize efforts using paid advertising?**

**Current Practice**

State funds have been used to develop and launch paid advertising campaigns for bicyclist and pedestrian safety.

**27. Does your State or an organization(s) sponsor on-bike safety training for children and/or adults?**

**Under Consideration**

On-bike safety training is available for both children and adults. The Lexington Area metropolitan planning organization (MPO)-sponsored bicycle rodeos cover sound safety basics for young bicycle riders. Use of hand signals is an especially important skill to teach young riders that will assist with riding safely on roads. Similar bike rodeos are also sponsored by Norton Children's Hospital. Safe Kids Fayette County conducts classroom presentations and rodeos as well.

These program can serve as models if the state is looking to expand bicycle safety training opportunities for youth to other areas.

In addition, the MPO has assisted in offering Traffic Safety 101 bicycle safety classes for adults. This is a comprehensive training that focuses on riding skills and safety. League-certified instructors go through a rigorous training program in order to teach courses. Riders with these





skills and knowledge can often serve as safe cycling models for other bicyclists.

**28. Are local level pedestrian and bicyclist safety education and outreach programs based on data?**

The Fayette County Safe Kids indicates they use evidence-based data for bicycle and pedestrian safety programs. However, there was no further information regarding the data that is used and how this affects program choices, target audiences, and objectives and outcomes.

Equity and Accessibility: Kentucky currently tracks age and gender with crash reporting, but does not compile additional demographic data from individuals involved in the crash or analyze demographics of the area where the crash occurred.

**29. Does your State and/or an organization(s) work with businesses to provide pedestrian and bicyclist safety education programs to their employees?**

**In Development**

The Lexington Area metropolitan planning organization (MPO) is working with businesses to provide bicyclist safety education programs to their employees. The MPO offers Traffic Safety 101 classes as part of efforts to promote the Bicycle Friendly Business program through the League of American Bicyclists. These comprehensive trainings focus on skills and safety. League-certified instructors go through a rigorous training program in order to teach courses. The Lexington MPO plans to host a minimum of two adult vehicular cycling courses annually for businesses that might be interested. There was no information regarding any similar efforts underway to address pedestrian safety by working with businesses. These same employers may be receptive to pedestrian safety information and programs as well.

**30. Does the State have a driver education course and does it include information on pedestrian and bicyclist safety?**

The only information that could be found was the Kentucky driver that was developed by the Kentucky State Police. The manual includes a few paragraphs on pedestrian crosswalks and blind pedestrian right of way. There is a page and a half of information regarding bicyclist safety in the manual.

**31. Does the State have a mandatory curriculum and does it address pedestrian and bicyclist safety?**

There was no information regarding the state having a mandatory curriculum for driver's education.

**32. Does the State's driver's license written examination include questions about pedestrian and bicyclist safety?**

There was no information the State's driver's license written examination and whether or not it includes questions about pedestrian and bicyclist safety.

**33. Is pedestrian and bicyclist safety training, resources and information provided to driver education professionals?**





There was no information provided regarding pedestrian and bicyclist safety training, resources and information that may be provided to driver education professionals.

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**34. Does the State provide multicultural/lingual pedestrians and bicyclists safety education?**

**Not At This Time**

The state was not able to provide examples of multi-cultural/multi-lingual materials for bicyclist and pedestrian safety.

**35. Are pedestrian and bicyclist safety messages integrated into other programs such as other traffic safety programs, science, health, and physical education school curriculums at all levels, and school and employer wellness programs?**

There was no information provided regarding traffic safety education being integrated into science, health, and physical education school curriculums at all levels, and school and employer wellness programs.

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**36. Are motorists, pedestrians, and bicyclists educated on new roadway engineering applications? If so, how?**

**Current Practice**

There has been limited educational outreach to motorists, pedestrians, and bicyclists on new roadway engineering applications that has been limited to the use of HAWK signals in Lexington. This area is an opportunity to expand these efforts to ensure motorists, bicyclists, and pedestrians understand how to safely use engineering infrastructure.

**Enforcement**

**37. Are law enforcement personnel specifically trained to investigate crashes involving pedestrians or bicyclists?**

**Current Practice**

Law enforcement personnel are specifically trained to investigate collisions involving pedestrians and bicyclists. Kentucky police recruits are required to attend basic collision investigation training. The Kentucky State Police and Louisville Metro Police (LMP) Training Academies, for instance, provide more than 1,000-hours of basic law enforcement training. LMP includes 143 hours of police response training, which includes pedestrian stops and critical incident dynamics. LMP provides approximately 100-hours of "investigation" training which includes basic interviewing techniques, crime scene processing, victim advocates, and court room testimony. LMP, additionally, provides 66-hours of Traffic training which includes directing traffic, collision investigations, and driving under the influence investigations. Here are other notable recruit training modules that add skills necessary to investigate collisions involving





bicyclists and pedestrians: - Vehicle Operations (Vehicle Dynamics, Collision Avoidance, Emergency Response, and Pursuit Policy - Cardiopulmonary Resuscitation and First Aid - Incident Command Structure - National Incident Management System - Mobile Data Terminals - Radio Communications - Records Management System - Police Training Phase (960 hours) The Kentucky State Police provides and requires all troopers to complete 40-hours of basic collision investigation training during the academy. The State, additionally, provides a 40-hour Pedestrian and Bicycle Reconstruction Course to select law enforcement—it is an advanced course. As a prerequisite, participants must have completed Collision Reconstruction Level 1 and II or the equivalent. This course, in part, includes the following: - Pedestrian/Bicycle Collision Investigation Intro - Crash Sequence Dynamics/Kinematics - Speed Analysis - Airborne Analysis - Pedestrian Project General Speed and What-If - Bicycle Analysis - Human Factors and Injury Analysis - Scene Diagramming - Case studies - Several Math Projects

### 38. Is distraction or impairment of all involved parties documented on the crash report?

#### Current Practice

The State captures distraction and impairment of involved parties on the Uniform Police Traffic Collision Report. The Kentucky State Police has custodial responsibility for statewide collision analysis and reporting. Most agencies utilize electronic crash reports. Information surrounding distraction and impairment are collected on crash reports through several categories: Driver Distracted By; Human Factors; Method of Determination; Pedestrian Factor (includes bicycles); Pedestrian Type; and, Tested For. For pedestrians specifically, “drinking or drug related” factors are captured but this category does not necessarily indicate pedestrian impairment. Furthermore, this category is only checked when the officer obtains drinking or drug related consumption through observation. As a result, pedestrian impairment is more than likely under reported.

### 39. Is there a State policy requiring timely crash reporting?

#### Current Practice

The State has a statute requiring timely crash reporting. Kentucky Revised Statute (KRS) 189.635 Vehicle accident reports by operators, law enforcement officers, and agencies—Availability—News-gathering organizations governs notification of a law enforcement officer having jurisdiction and law enforcement’s responsibility to investigate and file a written report through his or her law enforcement agency. In part, KRS 189.635 states the following: Every law enforcement agency whose officers investigate a vehicle accident of which a report must be made as required in this chapter shall file a report of the accident with the Department of Kentucky State Police within ten (10) days after investigation of the accident upon forms supplied by the department. A violation of this statute may result in a public official or employee, except justices, judges, circuit clerks, and employees of the Court of Justice, required to report to the department neglects or refuses to comply with the requests of the department, or its rules governing record systems and their maintenance, the department chief shall give written notice thereof to the person or persons authorized by law to disburse funds of the governmental agency to the public official or employee involved. No funds of the governmental







agency shall thereafter be paid to the public official or employee, whether in the form of salary, fees, expenses, compensation, or otherwise, until the department chief notifies the disbursing authority that performance of the required duty has been completed (Ky. Rev. Stat. § 17.157).

#### 40. Are law enforcement agency policies in place supporting both pedestrian and bicyclist safety?

##### Not At This Time

Law enforcement, universally, does not have an agency policy supporting both pedestrian and bicyclist safety. However, the Lexington Police Department (LPD) has a Safety City program designed for elementary age children in second grade. The Safety City program provides information on a range of topics which include traffic, school bus, pedestrian, bicycle, seatbelt, and firearm safety. Additionally, the program features a student-sized roadway with traffic signals that students utilize while driving special cars. The environment is miniature replicating the community “city” with a police and fire station along with a restaurant. LPD provides “Safe Walking Best Practices” available on their website <https://www.lexingtonky.gov/pedestrian-safety>. Louisville Metro, St. Matthews, and Shively Police Departments are stakeholders in Louisville’s Road to Zero coalition. The coalition reviews monthly roadway fatalities with the objectives to develop innovative strategies including technologies to reduce fatalities in peer cities and obtaining funding for future projects. Although the above examples are different, they are both examples of current resources used to educate or collaborate with community members; and may be used, in part, to develop a statewide pedestrian and bicycle safety policy.

#### 41. Are law enforcement personnel trained in both pedestrian and bicyclist safety, to include relevant State laws?

##### In Development

The State provides statutory, penal code, and/or ordinance training to law enforcement which includes pedestrian and bicycle laws and how to apply these laws when investigating collisions. Kentucky Revised Statutes (KRS) surrounding pedestrians and bicycles are identified in KRS chapters 189, 198, and 601. The Louisville Metro Police provides 53 hours of training surrounding criminal justice, penal code, arrest, search and seizure, use of force, and juvenile law. It remains unclear how many hours is specific to traffic laws and specifically to pedestrians and bicyclists.

The State provides statutory, penal code, and/or ordinance training to law enforcement which includes pedestrian and bicycle laws and how to apply these laws when investigating collisions. Kentucky Revised Statutes (KRS) surrounding pedestrians and bicycles are identified in KRS chapters 189, 198, and 601. The Louisville Metro Police provides 53 hours of training surrounding criminal justice, penal code, arrest, search and seizure, use of force, and juvenile law. It remains unclear how many hours is specific to traffic laws and specifically to pedestrians and bicyclists. The City of Lexington identifies Sec. 18-94 to 18-105 specific to pedestrian ordinances while Sec. 18-144 to 156 for bicycles. For certified police officers, some agencies augment bicycle patrols to increase visibility, mobility, which enhances vulnerable road user public interaction. Bike patrol may be utilized in residential neighborhoods, public housing,





business and entertainment districts, parks, and recreational areas to name a few. The primary functions of officers on bicycles are crime prevention, detection and enforcement, and to serve as a positive department liaison with community members. These officers receive additional training; they must wear and use all required safety equipment; and they must complete an approved police cyclist course. The evidence provided by respondents was consistent across jurisdictions. Law enforcement agencies do not receive bicyclist and pedestrian safety training and/or incorporate bicyclist or pedestrian safety training into their daily enforcement/education efforts. For instance, the Kentucky State Police receive no bicyclist or pedestrian safety training other than what is mentioned in Kentucky Revised Statutes. No law enforcement agency reported using training bulletins, roll call videos, on-line, or specific field training and evaluation program (for recruits) training modules to further train law enforcement. However, it appears agencies that incorporate bicycle patrols receive additional bicycle safety training and information but nothing specific was provided by the State.

**42. Are law enforcement personnel trained in effective measures to reduce both pedestrian and bicyclist crashes?**

**Not At This Time**

Law enforcement reported initial collision investigation training at the academy and additional training is obtained for those in special units (bicycle officers and collision reconstructionists); however, the overwhelming majority of law enforcement officers do not receive training in effective measures to reduce both pedestrian and bicyclist crashes. The State has not developed a bicyclist and pedestrian training curriculum surrounding effective measures to reduce pedestrian and bicyclist crashes. The State produced a document, Understanding Pedestrian Crashes in Louisville, KY 2006-2010 which recommended law enforcement focus on driver violations involving cell phones, DUI enforcement in high pedestrian crash corridors, and a three-stage process to help facilitate behavioral change, which include educate, warn, and cite violators. Although the document is arguably outdated, the State provided no evidence of enforcement efforts surrounding the previously mentioned driver violation enforcement efforts. The assessment revealed statements of targeting DUI enforcement in high crash corridors including those involving bicyclists and pedestrians; however, no tactical or operational plans were submitted highlighting enforcement efforts or results.

**43. Do State and/or local law enforcement agencies conduct data analysis to identify where and why pedestrian and bicyclist-motor vehicle collisions occur and who is involved and use this analysis to develop and evaluate countermeasures?**

**Not At This Time**

The State reported utilizing problem identification and evaluation to determine appropriate countermeasures. To elaborate, the State conducts data analysis to identify where and why pedestrian and bicyclist collisions occur. The Lexington Police Department, for instance, provides monthly reports to executives which include monthly and year-to-date crash rates (change in percentage) along with driver and pedestrian factors. It was further reported that law enforcement agencies not only are aware of crash locations but utilize engineering and other





enforcement tools to help reduce future collisions in respective hot spots. The State did not address the prevalence of law enforcement agencies conducting problem identification AND what countermeasures are deployed. The State reported relying heavily on sharing data with infrastructure professionals but there was essentially no information shared regarding how law enforcement is addressing behavioral highway safety through education and enforcement efforts.

**44. Do State and local law enforcement agencies conduct high visibility enforcement (HVE) at pedestrian and bicyclist-motor vehicle crash hot spots? Is HVE coupled with public outreach and education? Are the results captured and reported?**

**Not At This Time**

According to the Kentucky 2020-2024 Strategic Highway Safety Plan (SHSP) enforcement strategies including HVEs are focused on DUI and Occupant Protection enforcement efforts. However, the State’s plan is comprehensive and includes the four “E’s.” The SHSP emphasizes educating law enforcement; increased messaging and enforcement; impaired driving curricula delivery to include Lethal Weapon to law enforcement officers; increase enforcement in high crash areas; increase traffic enforcement in high crime areas; Click It or Ticket; Driver Sober or Get Pulled Over; and Sobriety Checkpoints to name a few areas related to law enforcement. The State reported no High Visibility Enforcement (HVE) at pedestrian and bicyclist-motor vehicle crash hot spots. Similarly, the State reported no recent public outreach educational opportunities provided by law enforcement. Louisville Metro Police Department (LMPD) reported past enforcement and education activities in hot spot locations. This was done by utilizing a “spotter” near intersections and dedicated patrols to initiate traffic stops on violators. This is an excellent example of law enforcement countermeasure activities to reduce incidents. Like many organizations across the country, the lack of staffing coupled with competing interests and priority calls-for-service have created challenges for law enforcement to participate in HVE campaigns.

**45. Are State and local law enforcement agencies included in infrastructure improvement project identification and selection (e.g.; a road safety audit, intersection redesign, installation of new signals, crosswalks, bike boxes or lanes, pedestrian refuge islands)? Do they conduct enforcement and/or education activities following project completion?**

**In Development**

The State does not provide basic infrastructure training to law enforcement. The State, however, reported law enforcement collaboration with a Metropolitan Planning Organization (MPO), via a steering committee, involving various stakeholders representing Lexington-Fayette Urban County Government (LFUCG), Kentucky Transportation Cabinet Planning – District 7, LFUCG Traffic Engineering/Engineering Divisions, and the Lexington Police Department. The steering committee reviewed historical data, future travel demand modeling, and field observation information to identify bottleneck locations. Following the evaluation and cost benefit analysis, committee efforts shifted to potential reduction in congestion and safety improvements for each selected project. In the above example, the Lexington Police





Department was invited for the purpose to reduce congestion; improve safety; identify critical transportation projects to program for investment; prioritize projects and programs; and develop conceptual designs. The committee, as a result, provided data which included bottleneck locations, high crash locations, and knowledge of programmed projects to name a few. This is a great example of infrastructure and selection engagement with law enforcement. There were a few more examples provided throughout the assessment (road safety audits) which indicated only a few jurisdictions effectively collaborate from an infrastructure and behavioral highway safety approach.

**46. Do State and/or local law enforcement agencies use automated enforcement (if allowed by law) and/or other technology (e.g., technology that measures safe passing distance such as C3FT to enforce safe passing laws, automated speed enforcement, red light cameras) to decrease pedestrian and bicyclist crashes? Do they issue an activity and/or impact report? Does State statutes allow for the use of automated enforcement?**

**Not At This Time**

The State currently prohibits the use of automated enforcement technologies such as C3FT to enforce safe passing laws, automated speed enforcement, and red-light camera. However, the State, through the senate, recently introduced Bill Request (BR) 92. In essence, BR 92 creates new law in Kentucky Revised Statute (KRS) 189 to incorporate “recorded images,” which include photographs, microphotographs, electric images, video, or any other medium of a motor vehicle entering an intersection against a red signal indication.”

**47. Do State and local law enforcement agencies partner with walking and biking organizations and/or advocates to address non-motorist safety?**

**Not At This Time**

The Lexington Police Department provided a presentation highlighting 2017-2021 bicyclist and pedestrian data which included collision locations; number of crashes in relationship to days of the week; and year-end totals—descriptive statistics. The presentation included crash mapping for visual context. The State, however, provided no information surrounding law enforcement partnerships with Biking/Walking or other advocacy organizations. Bike Walk Kentucky (BWK), a non-profit organization, has the mission to educate and advocate for safe bicycling and walking across Kentucky. According to BWK’s Strategic Plan, they partner with law enforcement to educate enforcement officials and the public. Bluegrass Cycling Club (Lexington, KY) is listed as a local advocacy group. Similarly, Louisville Bicycle Club reported advocacy in their bylaws, but NGO and law enforcement partnerships are rare in Kentucky. The State’s Bicycle/Pedestrian Safety Program states the following: Enhance pedestrian and bicycle safety and public awareness of each through education, to reduce the overall pedestrian and bicycle crash and fatality rates in Kentucky: • Maintain the pedestrian and bicycle safety content on the KOHS website that will include safety educational material, videos, safety tips, and various resources • Maintain working relationships/partnerships with pedestrian and bicycle programs or organizations in high impact areas in the state





**48. Is a brochure or pocket card listing all applicable pedestrian and bicyclist safety laws available to law enforcement?**

**Current Practice**

The State does provide a brochure or pocket card to law enforcement officers which list all applicable pedestrian and bicyclist safety laws. However, the Kentucky Transportation Cabinet (KTC) provides pedestrian and cyclist safety information and safety information for children on its website <https://transportation.ky.gov/BikeWalk/Pages/Safety-Information.aspx>. The material is generally limited to two pages and contains information published or released by the National Highway Traffic Safety Administration, KTC, or other State Highway Safety Office. Law enforcement officers have wireless access, via MDT, to search applicable laws and safety information. Other notable law enforcement and public information involving the State's Bicycle and Pedestrian laws may be found at [https://transportation.ky.gov/BikeWalk/Documents/KY%20Laws%20and%20Rules%20for%20Bicycle%20Travel\\_updated\\_2016.pdf](https://transportation.ky.gov/BikeWalk/Documents/KY%20Laws%20and%20Rules%20for%20Bicycle%20Travel_updated_2016.pdf) and <https://transportation.ky.gov/BikeWalk/Documents/Kentucky%20Laws%20and%20Regulations%20for%20Pedestrians.pdf>.

**49. Are pedestrian and bicyclist safety educational materials (e.g., brochure, posters, flyers, sticker, pocket guides, coloring books) available for officer use during a traffic stop; an interaction with a pedestrian, bicyclist or motorist; or in conjunction with a school visit or community event?**

**Under Consideration**

The State provides minimal pedestrian and bicyclist safety educational materials available to law enforcement—law/safety pamphlets and a coloring book. The State reported not emphasizing educational materials for the past several years. The State reported no posters, flyers, stickers, or pocket guides and no special events where educational materials would have been disseminated. Safety information may be found at <https://transportation.ky.gov/BikeWalk/Pages/Safety-Information.aspx> and <https://www.lexingtonky.gov/pedestrian-safety>. A couple of jurisdictions reported previous educational campaigns which included a cupcake card for reinforcing positive bicycle and pedestrian behaviors and a helmet program for those riders not having one or an ice cream card if the rider was wearing a helmet properly.

**50. Does your State or a local jurisdiction have a ticket diversion program or a written warning initiative for pedestrians, bicyclists and/or motorists that violate traffic laws?**

**In Development**

The State, through the Transportation Cabinet, has established a state traffic school for new drivers and for traffic offenders. Statutory authority for this diversion program is Kentucky Revised Statute (KRS) 186.574. District courts may in lieu of assessing penalties for traffic offenses, other than for KRS 189A.010, sentence offenders to state traffic school and no other. If granted, the judgment of conviction will indicate the offender completed state traffic school and driving points are diverted. There are other eligibility requirements to attend traffic school such as the driver cannot be suspended at the time of citation, a conviction carrying a mandatory





license suspension, once within a 12-month period, non-licensed and out-of-state drivers are not eligible, referrals must come from the District or Federal court level, and only applicable for minor traffic violations. For drivers 18 years of age or older, more than 12-points in a 24-month period will result in a license suspension.

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**51. Does your State have a program to recognize law enforcement for exemplary achievements in addressing both pedestrian and bicyclist safety?**

**Not At This Time**

The State does not recognize law enforcement for exemplary achievements in addressing both pedestrian and bicycle safety. Kentucky, however, honors law enforcement efforts highlighting impaired driving and occupant protection—Governor’s Awards. The State, additionally, has a multi-disciplinary task force (Impaired Driving Task Force) and Traffic Records Advisory Committee (KYTRAC). Law enforcement representation is robust on both committees. There was no information provided indicating if regional committees, councils, task forces, agencies, or other organizations recognize law enforcement for their efforts surrounding pedestrian and bicyclist safety.

**52. Does law enforcement regularly receive information on new roadway engineering applications and technology and how they should be properly used (specific to pedestrians and bicyclists), and what enforcement actions are authorized by statute based on implementation of the new roadway engineering applications and technology?**

There is no evidence that law enforcement regularly receives information on new roadway engineering applications and technology, how they should be properly used (specific to pedestrians and bicyclists), or how to apply the appropriate statute to support the change.

Recommendations: Communicate planned changes to the roadway environment to law enforcement at the State, regional, and local level regularly.

Emphasize the role law enforcement personnel play in pedestrian and bicyclist safety.





Educate law enforcement on the use of new technology or infrastructure improvements to ensure that officers can communicate the proper use and apply the appropriate statute as needed.

## Engineering

### 53. Is there a Department of Transportation unit, program or policy specifically focused on pedestrian and bicyclist safety?

#### In Development

There is a Pedestrian and Bicycle Coordinator position in the Kentucky Transportation Cabinet that is focused on engineering solutions. In addition a position has been established and plans are underway to retain an individual responsible for the monitoring and improving the safety of vulnerable road users (VRUs) that will be involved with non-infrastructure solutions/programs and the only staff assistant to the Pedestrian and Bicycle Coordinator. Pedestrian and Bicycle Safety was identified as an Emphasis Area in the 2020-2024 KY Strategic Highway Safety Plan that resulted in an additional position for non-infrastructure safety improvements, but that position has not yet been filled. This new position will be filled by a behavioral expert and is largely for educational-related messaging and programs. While the VRU emphasis area includes motorcycle safety as well as pedestrian and bicycle safety, the KYTC staff envisions that it will not detract significantly from the larger pedestrian and bicycle safety issues since the educational elements are consistent for the three modes. This should be monitored to assure that a major focus remains on pedestrian and bicycle safety. It was also reported that the Statewide pedestrian and bicycle coordinator position had previously been filled by a planner, but is currently filled by an engineer. This is a positive change as this position deals largely with engineering issues. However, the statewide pedestrian and bicycle position was reported to be an entry-level position which will result in a lack of program stability. A higher level position should be explored for improved program stability. The reported \$10,000 annual budget for this position is rather minimal and should be increased to provide a larger pedestrian and bicycle safety impact for Kentucky.

### 54. Does the DOT pedestrian and bicyclist safety unit, program or policy provide guidance on identification, selection, and implementation of engineering focused countermeasures?

#### Current Practice

The Highway Safety Programs Guidance Manual states that a strategic plan should be developed and implemented to address Section 402 program priority areas such as Pedestrian and Bicycle Safety. There are 9 priority areas, all of which are important and some of which will impact pedestrian and bicyclist safety. The response indicates that the guidance or policy is currently in the planning stage. In December 2020, the Kentucky Transportation Cabinet developed and adopted a Kentucky version of the STEP (Safe Transportation for Every Pedestrian) Guide for the identification of pedestrian safety countermeasures, entitled "Safety Action Plan for Implementing Pedestrian Countermeasures." It is modeled after the Federal STEP Guide. This guide also includes CMFs for the most common pedestrian safety countermeasures. Pedestrian





and bicycle safety improvements are evaluated on a project-specific basis, and these projects are often driven by local districts and communities. It was reported there are currently no PHBs (Pedestrian Hybrid Beacons - formerly known as HAWKs) on the state highway system but some of the local agencies are using them. The use of these devices should be expanded, primarily in urban areas on wide, busy streets and for crossings on higher speed roads. Greater application of RRFBs should also be encouraged, but the application of this device is for lower speed facilities with fewer lanes, as identified in the Kentucky STEP Guide. All RRFBs installed under IA-11, should be upgraded to the requirements of IA-21, if they have not done so already. There also appeared to be a need for greater guidance for the application of bicycle safety treatments, including protected bicycle lanes. While the status was listed as "Current Practice", more guidance, especially for improved bicycle facilities should be explored and more training provided on the use of newer pedestrian safety enhancements.

**55. Does DOT traffic engineering partner with local transportation agency engineering departments as well as State and local education and enforcement agencies to address pedestrian and bicyclist safety? Is there a traffic engineering partnership through the Local Technical Assistance Program (LTAP) that incorporates pedestrian and bicycle safety programs and designs into roadway projects?**

**In Development**

The state does have an LTAP, which is housed at the University of Kentucky, Kentucky Transportation Center. They are involved in providing guidance in pedestrian safety and ADA compliance. While the LTAP is not involved in design projects, they do provide assistance to individual safety challenges and provides training to state and local agencies. The DOT uses local public safety committee and a program that encourages community engagement. There have been some partnering between the Kentucky Transportation Cabinet and the local agencies, and often times it has been the local agencies (larger cities) that have been the primary driver for pedestrian and bicycle safety improvements. One of the primary issue is the lack of knowledge providing information on where pedestrian and bicycle infrastructure is needed. More stability in the Statewide Pedestrian and Bicycle Coordinator position will provide greater coordination with local agencies for these types of safety improvements and greater preservation of institutional knowledge at the statewide level.

**56. Does the State have a policy that requires consideration to accommodate the safe movement of pedestrians and bicyclists in all roadway project planning, design and/or maintenance?**

**In Development**

There is a policy, but it only requires ""consideration"" of providing pedestrian facilities if the roadway project meets one or more of seven listed criteria as well as four other considerations (urban areas), as well as 5 criteria for pedestrian facilities in rural areas. The bicycle policy also states that KYTC ""will consider"" bicycle accommodation if one or more of 7 criteria exists as well as 3 ""other considerations"" that are listed.

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(urban areas), or 5 criteria for pedestrian facilities in rural areas. The bicycle policy also states that KYTC "will consider" bicycle accommodation if one or more of 7 criteria exists as well as 3 "other considerations" that are listed. This policy from 2002 should be strengthened such that pedestrian and bicycle facilities SHOULD be provided if the stated criteria exists, and that criteria should be reviewed to assure no important conditions are missing. Pedestrian facilities should be included in all new projects unless pedestrians will be prohibited, or no pedestrian activity will occur in the foreseeable future. To a lesser extent, this should apply to bicycle facilities as well. The lack of pedestrian or bicycle facilities should be a design exception for most new roadway projects. The KYTC is currently working to update the 2002 Pedestrian and Bicycle Travel Policy. Staff reported to lack good information on bicycle and pedestrian needs and are currently looking into that issue. For example, there is a need to provide pedestrian and bicycle counts/exposure data. This type of data may be collected as a part of special projects, but are not collected routinely. While the state reported having no automated non-motorized traffic counters, Lexington reported having 5 automated pedestrian and bicycle counters, and are planning for more. There was a desire to use DERK data software platform to collect, analyze and evaluate count data. The type of pedestrian and bicycle facilities are selected from the appropriate design memorandum, which are developed by the Division of Highway Design. There is a need to review and possibly update some of the design criteria. The new guidance documents should be reviewed for incorporation into the design manuals, including the new AASHTO Guide for the Planning, Design and Operation of Pedestrian Facilities (2nd edition, published December 2021), and the new AASHTO Guide for the Planning, Design and Operation of Bicycle facilities (expected publication in 2022). In addition, the FHWA Bikeway Selection Guide (2019) should be incorporated into the Kentucky facility selection guidelines to assure the facility is appropriate for the expected or desired types of riders the facility is intended to serve. Since the Public Right of Way Access Guidelines (PROWAG) are expected to be adopted in 2022, those ADA requirements should be reviewed for adoption into the design manuals for new or retrofit facilities, including the use of accessible pedestrian signals (APS) at traffic signals where pedestrians are expected to cross. KYTC updated their ADA transition plan in 2021 and should be in good position when PROWAG is adopted.

Specifically related to the ADA and access for disabled Kentuckians, the ADA Transition Plan includes a complete assessment of areas needing ADA improvements on the state right of way. Historically and in current practice bike advocates are better represented than pedestrian advocates. Additionally, people with more resources tend to be more active in advocacy groups. It is time for both advocacy organizations and bike/pedestrian safety agency staff to intentionally work towards engaging a broader and more representative population.

#### **57. Does the State have a Complete Streets policy or guidance for reconstruction/rehabilitation projects on portions of State highways that serve as main streets in small communities?**

##### **In Development**

Kentucky currently does not have a Complete Streets policy but is working to develop one for the state by the end of 2022. Once the policy is completed, it will be adopted by the Transportation Director and will not have to undergo review (and possible rejection or





significant modification) by the legislature. Once adopted, a consultant will be retained to develop a design manual and a guiding document and to provide training for the Complete Streets Policy. It was reported that Louisville and their MPO (KIPDA - Kentucky Regional Planning and Development Agency) is also in the process of developing a Complete Streets policy along with the city of Lexington.

**58. Does the State have a policy that requires equity in transportation investment and programs with a focus on the underserved?**

**Under Consideration**

No policy statement is currently known to exist for Kentucky, but the state values equity and inclusion. A web address was provided listing providers of transportation alternatives for the underserved (Medicaid recipients to Medicaid facilities). Another provided website lists providers for public transportation in various communities throughout the state, which includes some rural transportation services and services such as Demand Responsive, Non-Emergency Medical Transportation, Veterans Transportation, paratransit services, fixed route transportation, etc. This type of policy on equity in transportation is expected to be a component in the Kentucky statewide Complete Streets Policy that is under development. The KYTC will be looking to update their policy on equity. There is an Equity Council and they hope to provide some guidance in this area. It was reported that the only highway safety plans using the term "equity" involves ADA treatments. One of the reasons for this assessment is to obtain input on equity and inclusion to best insure appropriate consideration for pedestrian and bicyclist needs.

Equity and Accessibility: The KY Transportation Cabinet has recently created an equity and inclusion council that is helping the cabinet internally develop best practices that are inclusive of everyone - striving for diversity, equity and inclusion. Of note, they are working to create pathways to hire more minorities and women, and that their hiring process does not unnecessarily exclude people without driver licenses. This is a critical step to achieving greater equity and accessibility in transportation projects, as having staff with more diverse lived experience can ensure those perspectives are represented in planning and decision making. As KY wants to connect with and conduct outreach to communities that aren't typically engaged with, having a diverse staff with relationships to underserved communities will be key.

**59. Does traffic engineering have a process to gather input on project planning, design and/or maintenance from stakeholders, interest groups and/or the public?**

**Current Practice**

The KYTC published a Public Involvement Process for Statewide Transportation Planning and Project Delivery in 2020. The report states: KYTC complies with Title 23 of the Code of Federal Regulations under Chapter 1, Subchapter E, Part 450, Subpart B, 450.210 (23 CFR 450.210) "Interested Parties, Public Involvement, and Consultation" processes by providing opportunities for public review and comment at key decision points. Within this document, the KYTC established procedures to cover the Long-Range Statewide Transportation Plan (LRSTP), the





Statewide Transportation Improvement Program (STIP), the Consultation Process, and the development and delivery of transportation improvements. The work that the KYTC conducts in pursuing its mission through project development and delivery moves in a continuous life cycle rather than a linear path. This process links the four main areas of transportation system development and maintenance (planning, design, construction, and operations) to deliver a safe, efficient, environmentally sound and fiscally responsible transportation system that facilitates safe and efficient movement of people and goods. The Public Involvement Process goal is to provide Kentuckians the opportunity to aid in the identification of transportation needs and priorities, the planning for how to meet those needs and priorities, and the development and delivery of transportation projects to turn those plans into realized improvements to the transportation system. One of the objectives of this process is to "Identify the affected populations, particularly in the traditionally underserved communities, with consideration for their strengths and challenges." During the pandemic, meetings for public input have been virtual. Information on transportation projects is also provided to the community via websites, through social media, and newspapers. It was reported that this public involvement process is working well. Examples were given of Lexington working closely with a District 7 project where considerable public involvement was obtained

**60. Does the State have its own bicycle and pedestrian roadway design manual or use a standard (national) design guide that establishes guidance and standards for pedestrians and bicyclists?**

**In Development**

Kentucky does not have a stand-alone manual, but the information is contained with the Kentucky Highway Design Manual. The 2020 edition of the Kentucky Highway Design Manual was reviewed. It includes accommodating pedestrians in work zones, Guidelines for Pedestrian and Bicycle Accommodations on urban roadways and rural roads. Guidance is provided for selecting the types of facilities, but the guidance is rather minimal (especially for bicycle facilities) and does not take into account the types of riders that the facility is attempting to serve. For bicycle facilities with shared traffic lanes, it states "An outside or curb lane wider than 12 feet can better accommodate both bicycles and motor vehicles in the same lane. . . . In general, 14 feet of usable lane width is the recommended width for shared use in a wide curb lane." This type of bicycle facility will only accommodate the most confident riders. Most other bicyclists will not feel comfortable on riding in traffic under these conditions, especially on high speed roads or roads with a higher percentage of trucks/buses in the traffic flow. Guidance for bicycle lanes is also rather minimal (The recommended width of a bike lane is generally 5 to 6 feet from the face of a curb or guardrail to the lane stripe (the width of the gutter pan is included). For roadways with no curb and gutter or guardrail, the minimum width of a bike lane "should be 4 feet", and there is no discussion of Bike Boulevards or protected or buffered bike lanes. The section on accommodating pedestrians and bicycles at intersections is two paragraphs long and it references the 2002 Pedestrian and Bicycle Travel Policy and HD-1500, as well as AASHTO's Guide for the Development of Bicycle Facilities, FHWA's Separated Bike Lane Planning and Design Guide and AASHTO's Guide for the Planning, Design and Operation of Pedestrian Facilities. For pedestrians, sidewalks are to comply with ADA, but the referenced





proposed PROWAG Guidelines only states that it "may be a valid reference". The Complete Streets Policy that is under development will include its own stand-alone design manual for pedestrian and bicycle facilities.

#### **61. Does the State use data for planning, design, and maintenance?**

##### **In Development**

A web source for GIS Data and Maps exists containing general highway information, ADTs, percent of truck traffic, HPMS data, daily miles travelled, pedestrian and bicycle facility inventory maps, etc. The website states that "The Kentucky Transportation Cabinet (KYTC) will consider the incorporation of pedestrian and bicycling facilities on all new or reconstructed state-maintained roadways in existing and planned urban and suburban areas." The KYTC Bike and Walk website also has a link to all of the known bicycle and pedestrian master plans and action/advocacy organizations, with numerous plans dating from 1991 to 2019 (with most completed during the last 10 years). There is also a link to the 2021 Americans with Disabilities Act Transition Plan along with a map to ADA barriers throughout the state highway system. The item most lacking is the pedestrian and bicycle exposure data that is not currently available except when special project-related counts are made. Kentucky is conducting a consultant research study to capture non-motorized exposure data. This study is supposed to be completed by the end of 2022. Another challenge is capturing pedestrian and bicycle related crash information. Unless there is serious injury, it is thought that crashes involving non-motorized modes are often not reported. Unfortunately, bicycle crashes are being reported as a single-vehicle crash, and there is a need to pull the reports to get necessary details in these crashes. There is a system for reporting maintenance issues to the KYTC for the state highway system (SHS), such as potholes. There is also an ADA-related hotline to request corrective action. While the overall rating is "In Development" due to the lack of non-motorized exposure data, much of the elements exist for this area.

#### **62. Does the State use data to identify and address systemic issues and high crash locations?**

##### **In Development**

Kentucky conducted a study in 2018 for the 2020 HSIP that identified the high pedestrian and bicycle crash locations, which stated, "From 2014 to 2018, there were 866 fatalities involving vulnerable roadway users in Kentucky, which accounted for 23 percent of all highway fatalities. Of these 866 fatalities, 449 (52 percent) were motorcyclists, 378 (44 percent) were pedestrians, and 39 (5 percent) were bicyclists." The inclusion of motorcyclists as a Vulnerable Road User may detract from pedestrian and bicyclist safety issues. The plan identified the following roadway improvement types: Installing Pedestrian Refuge Islands at busy intersections, and Developing Road Diets for corridors that feature large numbers of non-motorized road users. The 2018 Kentucky Transportation Center study resulted in a list of prioritized locations for pedestrian/bike crashes as part of our Highway Safety Improvement Program (HSIP). Engineering strategies listed for pedestrians and bicyclists in the 2020 SHSP include More sidewalks; separate facilities for bikes and pedestrians, improved street lighting, road diets, pedestrian refuge islands, RRFBs, LPI, etc. Some of the listed bicycle and pedestrian safety





improvements do not appear to result in positive safety improvements. There was no mention of pedestrian hybrid beacons (HAWKs), or the use of FYA to implement protected left-turn arrows when conflicting pedestrian movements occur. There is an annual screening process for high crash locations, but they typically do not focus on pedestrian and bicyclist crashes. Kentucky is mostly a rural state and pedestrian and bicycle crashes are typically not concentrated in rural areas. There is a desire to obtain statewide pedestrian and bike volumes to develop pedestrian and bicycle SPFs. The KYTC is working with the local university for network screening purposes, but the screening does not typically focus on pedestrian and bicycle crashes. Kentucky has not developed state-specific CMFs, but developed a search tool (with help of UK Transportation Center) for the most common countermeasures. CMF Search Tool was done just after the CMF clearinghouse was “updated”, providing the more accurate crash reductions for the most common countermeasures. While the conclusion was reported as "in Development" due to the lack of pedestrian and bicycle exposure data, much of the other elements to meet this question are in existence.

**63. Does the State have a data warehouse that is used to access and share data and information among key stakeholders such as law enforcement, health providers and institutions, educators, researchers, and transportation and transit providers?**

**Current Practice**

There is a data warehouse inside the KYTC called TED (Transportation Enterprise Data.) This includes updated crash data and the weekly update of Planning Highway Information system (HIS database) for the state highway system. Most of the components from TED are available to outside consultants or the public except for collision detail information from the Kentucky State Police. For outside agencies that work with KYTC, there is a MOU that allows them to have the needed access including the log-in portal used by Kentucky State Police for this type of data. The Kentucky Transportation Center (KTC) has developed a Collision Data Analysis Tool (CDAT) that links crash and roadway data for safety analysis. This tool is used by various agencies. KTC has a project available as part of their Traffic Records Coordinating Committee (TRCC) that offers data services to anyone interested in safety. The service puts the data requester in contact with data experts that can extract or link traffic record data. The CDAT – Collision Data Analysis Tool can be accessed from outside of KYTC. There are additional data components for other uses as well, including a Bridge inventory, etc. They do not have police citation information, but the data warehouse has just about everything else that is currently collected and inventoried. When pedestrian and bicycle exposure data is obtained, it will be a part of the data warehouse. The Kentucky Traffic Safety Data Services (KTSDDS) website was designed in partnership with the KYTC, the Kentucky Transportation Center and NHTSA, and provides a list of completed projects that may be replicated in other areas. The projects have a short description and a link to the principal investigator.

**64. Does the State use the formalized Road Safety Audit (RSA) process to identify needed pedestrian and bicyclist safety infrastructure improvements on existing or planned roadways and do multiple stakeholders, including the public, participate in this process? Is the RSA process used by local road**





## agencies?

### Current Practice

RSAs are conducted by KYTC. In addition there is a Safety Circuit Rider Program (SCR) program that is funded by HSIP and is done by the LTAP for select rural communities. The SCR analyzes data each year and identifies focus counties and assists them to identify high crash locations/routes. Once identified, they may result in an RSAs. RSAs in the rural areas do not focus on pedestrian and bicycle safety because this is not where the concentration of pedestrian and bicycle activity exists. The non-motorized modes are concentrated largely in the urbanized areas. While RSA training is conducted, they have not conducted RSA training over last couple of years due to pandemic. It was reported that there are no pedestrian or bicycle-specific RSAs. Kentucky wants to extend RSAs and RSA training to local agencies. The RSA teams do include law enforcement, but the law enforcement agencies are stretched rather thin and are not always able to participate.

## 65. Is there a process in place to identify a return on investment and evaluate a completed project's impact on roadway user safety? Does the return on investment findings impact decisions on future improvements? Are the findings shared with project stakeholders and the public?

### Current Practice

Kentucky has an active HSIP Program to identify treatments for high crash locations based on crash severity. Per the FY 2018 HSIP, the goal related to pedestrian fatalities is to decrease pedestrian fatalities 3% from the 2012-2016 calendar base year average of 63 to 65 for the 2014-2018 calendar years average. The Kentucky HSIP currently has a budget of \$44 million with the Fast Act, and is split between projects for intersections as well as corridors, and has identified a number of challenge areas. The HSIP investment plan is currently being rewritten. The Benefit to Cost ratio (BCR) used in Kentucky looks at all crash severities, and the projected crash reductions are based on CMFs from the CMF Clearinghouse. KY has not developed their own CMF list, but developed a search tool (with help of University of Kentucky Transportation Center) to identify CMFs for the most common countermeasures. CMF Search Tool was developed after the CMF clearinghouse information was updated, so it contains the most current information. They may use CMFs with lower star ratings if they are the only CMFs available. One of their main issues is the lack of pedestrian and bike exposure to evaluate non-motorized projects. It is Kentucky's practice to use a blended cost for K+A crashes instead of a separate cost for each individual severity, which is the recommended practice. They use a weighted average for K+A+B severity collisions. The FY 2018 HSP states that the Kentucky Transportation Center (KTC) of the University of Kentucky is contracted to conduct an annual review of crash data from the most recently available year, as well as the prior four-year period. The KTC uses this data to develop the following documents on an annual basis: Analysis of Traffic Crash Data in Kentucky and Kentucky Traffic Collision Facts. These documents contain the most comprehensive published collection and analysis of statewide crash data available including who is involved in crashes, what types of crashes, vehicles and roadways involved, where the crashes are taking place, when the crashes are taking place and why the crashes are occurring. This data is used in the identification of safety projects. The programs and projects





are designed to impact problems that are identified through the problem identification process and support the goals, objectives and strategies identified within our Strategic Highway Safety Plan (SHSP). The Kentucky Office of Highway Safety (KOHS) staff holds meetings throughout the fiscal year to plan and coordinate major programs and initiatives in collaboration with the strategies, goals and objectives of the SHSP. This process includes input from partner agencies including those stakeholders who are members of the Governor’s Executive Committee on Highway Safety. Problem identification and strategic planning for highway safety is a team approach that includes staff within the Kentucky Office of Highway Safety as well as all stakeholders who are actively involved within the Governor’s Executive Committee on Highway Safety.

**66. Does the State have an engineering and/or educational program addressing safe walking and bicycling routes to transit? That links transit and bicycles?**

**Not At This Time**

There is no engineering or educational program specific to walking or bicycling to and from transit in Kentucky. There is a desire to learn how to address safety education for each mode, and the Kentucky were hoping to obtain this type of feedback as a part of the assessment process. This appears to be a fertile field for Kentucky to explore as a large proportion of pedestrian crashes are often related to trips to or from transit, especially with respect to street crossings. Often times, the transit agencies have no idea if a pedestrian or bicyclist crash occurred unless it involves one of their vehicles, and the traffic engineering staff are not aware if the pedestrian crash was related to a trip to or from a transit stop. The Kentucky websites lists the bicycle and pedestrian plans and organizations across the state, and this may be a good starting point to identify partners in working on this issue. Kentucky does not have a Safe Routes to Transit program, but are looking at eliminating barriers to transit as a part of their ADA Transition Plan. It was reported that transit agencies are looking for issues to correct, but it is largely done in urban areas, and it is largely a local issue. This area should be explored to identify how a program can be developed and implemented and how partnerships can be developed with the local transit agencies.

**67. Does State roadway infrastructure development and prioritization include consideration of pedestrian and bicyclist accommodation and safety?**

**Under Consideration**

The roadway infrastructure development and prioritization currently does not include considerations of bicycle and pedestrian accommodations and safety, however, the Division of Planning is currently conducting a research project that is determining a way to capture bike and pedestrian data so that it can be added to the SHIFT process for prioritization of projects. SHIFT is a collaborative, data-driven process to help prioritize transportation projects and create a more balanced State Highway Plan. The SHIFT formula, which uses quantitative data as well as input from state and local transportation leaders, and focuses on Safety, Asset Management, Congestion, Economic Growth and Benefit/Cost. The research project to identify a way to capture bike and pedestrian data is being conducted the University of Kentucky, Kentucky





Transportation Center, which is the research arm for the state. They expect to have the study completed by the end of 2022.

**Equity and Accessibility:** While Kentucky does not appear to have an estimate for the percentage of the population that cannot drive and is therefore transit, paratransit, walking and rolling dependent, national data (cited in Louisville's Complete Street Policy) estimates that a third of the population does not have reliable access to driving for transportation.

It was encouraging to hear agency staff in Kentucky starting to think about access for nondrivers, in particular to parks and open space, and regional trails like the Muir Trail project.

**68. Does the State have its own roadway design manual, guidance or statement for following national standards and regulations for the design, construction and maintenance of pedestrian and bicycle facilities?**

**Current Practice**

Kentucky does have bicycle and pedestrian policy and design information contained within the Highway Design Manual, but it could use some updating and expansion. Section HD 1501.01 states as an overview: "It is the Kentucky Transportation Cabinet's policy to enhance operational efficiency, promote program goals, and enrich the quality of life through the implementation of the Pedestrian and Bicycle Travel Policy. The following guidance describes the most appropriate inclusion of pedestrian and bicycle facilities for roadway projects. The design executive summary (DES) should document the decision of whether or not to include pedestrian and bicycle facilities. AASHTO's Guide for the Planning, Design, and Operation of Pedestrian Facilities and Pedestrian Right of Way Access Guidance (PROWAG) should be consulted for the design of pedestrian facilities. AASHTO's Guide for the Development of Bicycle Facilities provides guidance on the design of bicycle facilities." The guide provides criteria where bicycle and pedestrian facilities "may be considered". Facility dimensions provided are often minimal, and some design features such as Bicycle Boulevards, buffered bike lanes, protected bike lanes, and devices such as pedestrian hybrid beacons (PHBs - formerly known as HAWKs), or the application of the flashing yellow left-turn arrow to prevent pedestrian/bicycle conflicts with left-turning motorists on a cycle by cycle bases do not appear to be included in the Highway Design Manual. While it is good that information is contained with the Kentucky Highway Design Manual, the design guidance should be reviewed to make the absence of nonmotorized facilities is a 'design exception' and to make sure that the ultimate projects do not design to the minimum or result in long crossings or uncomfortable walking and bicycling environments that are only usable by the most experienced bicyclists. A review of the design criteria should be conducted to provide updates to include the new AASHTO pedestrian design guide and other FHWA and AASHTO documents. Successful project implementations should be documented and shared throughout the state for additional implementation.

**Emergency Medical Services**







**69. Does the State have a current EMS Plan and, if so, is pedestrian and bicyclist safety addressed in that plan?**

**Under Consideration**

Kentucky does not currently have an EMS plan. Many states have some administrative plan that includes goals and objectives for a coming period of time (such as 5 years). While these plans often do not have specific references to bicycle and pedestrian safety, goals for injury prevention or public education programs that relate to bicycle and pedestrian safety are common. It is acknowledged that the Kentucky Board of EMS has faced a couple of years where they have been responding to the COVID pandemic and a series of other natural disasters. During the interviews, the topic of developing an EMS plan was discussed and the Board of EMS appears open to creating such a plan. The dialogue about, where does the Commonwealth want to be and how might you get there is always a useful exercise in steering a course of progress.

**70. Does the State have a 9-1-1 system that is accessible statewide? Does it have or is it migrating to enhanced (E-9-1-1) capabilities?**

**Current Practice**

Kentucky has a seven-member 911 Services Board (including EMS representation) that is part of state government and is working to plan for and implement NG 911. At present, 911 calling with automatic number identification and automatic location identification (Enhanced 911) is accessible statewide for both land lines and wireless phones. Given the geography and demography of KY, wireless communications are reported to be less reliable in the eastern mountainous region than the central and western portions. Currently about 80% of 911 calls come from wireless phones. Most of KY's 120 counties operate their own public safety answering points (PSAPs) although a few counties have combined operations in recent years. All of the PSAPs do emergency services dispatching. The 911 Services Board collects wireless fees in support of 911 operations and distributes them to the counties on a statutorily established formula. Land line rates are set in statute and go directly to the counties. The number of land line phones is declining over time so there has been a corresponding decrease in this source of revenue.

**71. Is the State working to implement Next Generation 9-1-1 (NG-9-1-1)?**

**In Development**

Kentucky is planning for implementing NG 911 service. The oversight of this initiative falls to the Kentucky 911 Services Board in coordination with the county operated PSAPs. The 911 Services Board includes a representative group of stakeholders including EMS. That board commissioned a report titled, Kentucky NG 911 Roadmap, that was published in November 2020. The Roadmap includes a NG 911 Readiness Assessment that was prepared by the Mission Critical Partners consulting firm. It is acknowledged that planning and operationalizing NG 911 capabilities is challenging for every state. Kentucky has chosen (and perhaps wisely so) not to be at the bleeding edge of NG 911 implementation and to learn from the experience of other states. The Commonwealth has been investing heavily in its development of the GIS mapping and data necessary to support NG 911 capabilities. A NHTSA NG 911 grant of \$2.3 million coupled with





\$1.5 million matching funds has boosted this effort. The county PSAPs have been upgrading their equipment to support future NG 911 operations. The Kentucky State Police manage an interoperable radio system that is working well. It was reported that KY is well poised to make substantial progress on having NG 911 operational during the next two years.

**72. Does the State prepare and educate EMS personnel using the current version of the National Emergency Medical Services Education Standards?**

**Current Practice**

Kentucky educates EMS personnel using the National EMS Education standards at all four nationally recognized levels. In addition, the state uses National Registry of EMTs certification for initial licensure at all four levels. The state's pass rate on the NREMT EMT exam as reported by the NREMT is reasonably consistent with the rate in most other states. Access to EMT level education was reported as good statewide. Paramedic education is somewhat more challenging although KY has eight accredited Paramedic programs including an on-line hybrid course. All EMS personnel renew their EMS certification/license every two years. Those workers have the option of submitting an updated National Registry of EMTs certification or providing evidence of continuing education meeting the 2016 National Continuing Competency Program requirements. Most of Kentucky's EMS personnel are paid. There are only 5 of 218 EMS agencies classified as volunteer. It was reported that like most other states, Kentucky needs more EMS personnel. As the need for EMS personnel becomes more acute, wages have been increasing due to workforce competition. Better pay is a good thing for the EMS workers but creates a challenge for the counties and other EMS employers. Kentucky is not currently a member of the EMS Compact. Entering the EMS Compact would enable easier cross border sharing of EMS personnel particularly in times of unusual demand such as a pandemic.

**73. Are EMS personnel trained in and required to use an algorithm such as the CDC's Guidelines for Field Triage of Injured Patients for assessing injury severity and appropriate treatment facility (e.g., a designated trauma center or community hospital ED)?**

**Current Practice**

Kentucky has guidelines for Field Triage of Injured Patients that are based on the most recent CDC Guidelines for Field Triage. The Kentucky guidance has been amended in a few sections to accommodate the significant challenges of trauma care in rural parts of the Commonwealth, including the designation of Level IV trauma hospitals. The Kentucky guidance was produced in 2014. While the KY triage guideline is not required for statewide use, it or another approved version must be in place. Having this guidance in place statewide is important in meeting the goal of getting the right patient to the right hospital in the right amount of time. In a heavily rural state like KY, where the nearest hospital to a seriously injured pedestrian or bicyclist may not have all the capabilities needed to manage the patient's injuries, this guidance is evidence the stakeholders in the EMS system have identified the optimal pathway to care.

**74. Does the State have a transport protocol that promotes safety first? Does it address mode (e.g., ground versus air)?**



**Current Practice**

Kentucky has a comprehensive package of up to date EMS protocols that include excellent safety guidance on use of airmedical services as well as lights and siren use in ground response and transport. The safety guidance is nicely linked with clear clinical guidance about when and (when not) a helicopter may be useful in the care and transport of critically ill and injured persons. This is one of the better state protocols on this topic I am aware of and may make a useful reference for other states. Kentucky should also be commended for keeping its statewide EMS protocols up to date. The current version published in September 2021 includes clear information for EMS responses during a Pandemic. EMS agencies and their medical directors do have the option of filing autonomous protocols with the KY EMS Board but all must be based on the 2019 National EMS Scope of Practice Model. Whenever the statewide protocols are updated, a change notice is sent to all agencies who disseminate the information to their personnel. The Commonwealth uses an app called "Heads Up" which contains a link to the statewide protocols as well as other useful functionalities.

**75. Is the State's patient care reporting system NEMSIS compliant?****Current Practice**

Kentucky has a statutory requirement for all ambulance services to submit information on all responses through the state's NEMSIS compliant Kentucky State Ambulance Reporting System known as KSTARS. The Commonwealth is currently using ImageTrend's NEMSIS 3.4.4 software but is awaiting the release of NEMSIS version 3.5. The Commonwealth's statute on EMS data collection and reporting covers many related topics including; timeframes for reporting, a requirement to provide a report at a hospital prior to departing the facility, data quality parameters and quality improvement plans in cases where data quality is found to be deficient. The statute also establishes a Data Management Committee and provides for the sharing of non-confidential data with other organizations who have a common interest in the promotion of improved patient care. It was reported that about 68% of incident reports are into the system within 72 hrs which is fairly close to real time reporting. 95% of agencies are using field tablets or similar technologies for data capture and reporting. At present, there is little integration of 911 PSAP/dispatch for directly populating EMS incident reports. Funding for KSTARS comes from the Commonwealth's Highway Safety Office. This is important to note because it signals a real partnership where Highway Safety is investing in building an important component of a comprehensive highway safety information system and the Bureau of EMS is accessing those resources for getting the work done with the EMS provider community. Opportunities for the future may be further development of provider feedback reports and sharing of KSTARS data with other data systems.

**76. Is NEMSIS data used to assess the quality of EMS provider performance?****Current Practice**

The Kentucky NEMSIS complaint data system, KSTARS, enables ad hoc reviews of EMS provider performance. The state also uses National EMS Quality Alliance NEMSIS data quality measures as a way of communicating about quality to EMS agencies. Feedback and quality performance





activities for individual EMS personnel are done through their employer EMS agencies. It is a requirement that EMS agencies have an internal continuous quality improvement process with physician medical oversight and links to training. The Bureau of EMS does relatively little to monitor the performance of individual personnel since the system is in place for that at the local level. At a national level, Kentucky is submitting its EMS data to the National EMS information system which contributes to important understandings of how EMS is delivered nationally. One of the best uses of statewide EMS data systems is for provider feedback and performance comparisons with peers.

#### **77. Does the State have a trauma registry?**

##### **Current Practice**

The Kentucky Trauma Registry (KTR) was established by state law (KRS 211.490 et seq.; 902 KAR 28:040) to be the statewide repository for trauma data. It is housed administratively in the Kentucky Department for Public Health and managed by the Kentucky Injury Prevention and Research Center (KIPRC), a unit of the University of Kentucky's College of Public Health and a bona fide agent of the Kentucky Department for Public Health. All trauma centers designated by the Commissioner of Public Health in the Kentucky Trauma Care System maintain trauma registries that are compatible with the National Trauma Data Bank standards established in the National Trauma Data Standard Data Dictionary. The same standards apply to trauma centers in the process of applying for designation. The trauma centers upload their trauma data electronically at least quarterly to the KTR. ESO is the vendor that manages the downloading and compilation of data from participating trauma centers including unverified facilities that report to the registry and supplies the data to the Kentucky Injury Prevention and Research Center. In an effort to assure rural communities access to trauma care, the Commonwealth designates Level IV trauma hospitals. These facilities commit to having the resources to receive, do limited stabilization and then transfer major trauma patients to higher level facilities. The Level IV hospitals also enter their data into the trauma registry which is an important step in the ability to follow patients for timeliness and appropriateness of care as they move through the system. As of 2019, there were 26 hospitals designated or in process of becoming designated as trauma centers. Pedestrian and peddle cyclist injuries represented 6.45% of unintentional motor vehicle collision injuries (278 total). While that number is a relatively small part of the 14,000 entries in the trauma registry, it is important to note that the trauma registry only captures the most serious injuries and not all less serious cases managed at other hospitals. Funding from the National Highway Traffic Safety Administration, made available through a grant from the Kentucky Office of Highway Safety, supports software or portal activation costs for a trauma facility's first year in the KTR as well as the compilation of this report and other initiatives. It was stated in the 2019 and 2020 trauma system reports that work is ongoing to integrate EMS data elements related to incident times and times of transfer from other hospitals into future KTR reports.

#### **78. Does the State have a statewide Injury Surveillance System (ISS) that captures EMS and other data, and is the ISS publicly accessible and integrated with the crash database?**





### **In Development**

The Kentucky Injury Prevention and Research Center (KIPRC), established in 1994, is a unique partnership between the Kentucky Department for Public Health (KDPH) and the University of Kentucky College of Public Health. KIPRC serves both as an academic injury prevention research center and as the KDPH's designee or "bona fide agent" for statewide injury prevention and control, focusing on injury prevention translation and practice. This state–university partnership provides KIPRC access to expertise and support in injury and violence-related research, data, services, outreach, communications, interventions, evaluation techniques, and policy development, at both the state government and academic levels. KIPRC's unique, mature partnership uses injury prevention research to inform and implement targeted interventions that are evaluated and adopted into local and state injury prevention practice. This ready translation of research into practice, in turn, informs further research to reduce injury and related death and disability. This process is embodied in KIPRC's philosophy to conduct "injury prevention and control research to practice." The KIPRC website reported in 2018, "pedestrian-involved accidents account for approximately 10% of fatal motor vehicle fatalities". KIPRC is an important asset for the Commonwealth to continue engaging in efforts to eliminate pedestrian and bicyclist injuries. Their public health approach and ability to aggregate data from multiple sources can inform all stakeholders in this effort. The KIPRC would appear to be the entity best situated to combine Trauma Registry, EMS, CRASH, hospital discharge, death certificate and other data sources for use by the spectrum of bicycle and pedestrian safety stakeholders.

## **79. Does the State have a public education and outreach program promoting bystander care?**

### **In Development**

Kentucky was described as having a "blend and mix" of approaches and programs for bystander care training. In some locations, local emergency management is building or has in place community emergency response teams (CERT). These CERTs are in place to supplement community resources in times of increased demand for services such as natural disasters, special events or pandemics. Some trauma centers may be providing bystander training as part of their outreach. This topic appears to be one where Kentucky would benefit from a more consistent statewide approach. Most bystander care training begins with information on when, how and why to call 911. That initial step of demystifying 911 and giving people permission to access emergency services is an important one in improving injury outcomes. The Stop the Bleed program is an excellent resource on definitive steps to take, up to and including tourniquet use for controlling hemorrhage. CPR courses teach how to open and manage airways as well as perform CPR in cardiac arrest cases. It is likely some or all of these courses are being delivered today by various authorities and could be better documented and coordinated. Local EMS/fire and law enforcement agencies may provide them. Driver's education and physical education teachers sometimes include them. Scouting groups teach first aid merit badge and other similar training. The value in a coordinated statewide approach is to be able to track what training is occurring where and how often. KSTARS can provide insight into how often bicycle and pedestrian injuries receive bystander assistance prior to arrival of EMS resources. Similarly, the Kentucky Trauma registry can give insight into how often serious injury cases arrive at a trauma





center by other than EMS transport. Tracking those today and into the future would provide information over time as to whether organizing and monitoring bystander training changes where and how often bystanders are involved in calling 911 and initial on-scene patient management. Like any other system change, it will be important to identify the resources necessary to support this statewide initiative.

**80. Does the State have a Good Samaritan law that provides immunity to volunteers or bystanders that provide lifesaving assistance to a crash victim?**

**Not At This Time**

It appears that Kentucky does not have a Good Samaritan statute that meets the definition- "provides immunity to volunteers or bystanders that provide lifesaving assistance to a crash victim". The Commonwealth does have related legislation providing exemptions from liability for a few similar categories of assistance including; 311.668 Immunity from civil liability for user of automated external defibrillator, 313.257 Nonliability of licensees for emergency care, 411.148 Nonliability of licensees and certified technicians for emergency care, and, KRS 218A.133 which protects people from prosecution when they report a drug overdose. Kentucky has taken the approach of exempting licensed or certified healthcare providers from liability when they render voluntary assistance outside their usual practice settings. Kentucky has also limited liability associated with use of automated external defibrillators and the reporting of drug overdoses. Most other states have legislation that would protect any unlicensed or uncertified bystander from liability when they voluntarily stop to provide assistance to any person (e.g. injured bicyclist, pedestrian or anyone else with a medical emergency) in need. While the history of Good Samaritan legislation in Kentucky is unknown, this legislation is sometimes opposed in other states by trial lawyers who are attempting to preserve the rights of injured persons with adverse outcomes to bring lawsuits against bystanders who attempted to provide assistance. In other states, the legislatures have weighed the risks and benefits of exempting bystanders with no formal medical training from liability and decided the public interest is best served by having a statute to provide immunity for people who help.

**81. Is the State's 9-1-1 call center(s) or public safety answering points (PSAPs) able to receive data from Advanced Automatic Collision Notification (AACN) technologies such as OnStar® when a crash occurs? Do they have the capability to interface with apps such as Good Samaritan?**

**In Development**

Receipt of advanced automatic collision notification (AACN) data and information will be part of the capabilities that come with implementation of NG-911. Today PSAPs get this information either through direct land line calls from proprietary centers or through use of systems (e.g. "Rapid SOS" or "Rapid Deploy") that the PSAP purchases. AACN information is valuable in that it informs emergency personnel about numbers of occupants in the vehicle, change in velocity during a crash, safety belt use in the vehicle and similar metrics that can guide resource deployment before a responder reaches the scene. Putting this information into the hands of responders at the earliest possible moment is all a part of strengthening the chain of survival for seriously injured persons.



**82. Are street-level traffic cameras monitored to detect and dispatch EMS to the scene of pedestrian and bicycle crashes?****Under Consideration**

Like most other states, Kentucky is a minimal user of street level cameras for crash monitoring and early emergency dispatch. The concept of having "eyes on" crash prone locations theoretically can lead to faster emergency responses if a PSAP witnesses the incident and immediately dispatches the necessary resources. Very few states have cameras in place solely for this purpose. More commonly, cameras are deployed for monitoring traffic flow, roadway conditions, crime activity and other purposes. It was reported that the urban areas of Louisville and Lexington may have cameras in some locations, possibly near schools. The concept of having street level cameras for multiple purposes makes good sense and may be the approach Kentucky chooses to use.

**83. Do State injury prevention and local EMS agencies partner with law enforcement to address non-motorist safety? Do they partner with DOT and/or local government roadway agencies?****In Development**

This question is really about the relationships that various stakeholders in bicycle and pedestrian safety have. EMS, law enforcement, highway engineers, injury prevention specialists, user groups and others all have perspectives on the bicycle and pedestrian safety problem. These different backgrounds come to the table with access to different data sources and varying tools in their toolkits to address bicycle/pedestrian safety. The solutions they can identify collectively are usually better than any can identify individually. The Kentucky Livesavers Conference that prior to the COVID pandemic had been hosted every two years was identified as the forum where the various stakeholder groups come together to focus on multidisciplinary approaches to improving roadway safety. This is a great start and continuation of this program should be encouraged. Beyond a once every two years event, Kentucky should consider how these groups can collaborate locally or on an ad hoc basis when issues are identified. The Kentucky Injury Prevention and Research Center seems like a natural forum where local EMS groups and their local partners could get together to focus on bicycle and pedestrian safety.

**84. Are EMS personnel permitted and or encouraged to deliver traffic safety education at school and community-based settings? And if so, do they?****In Development**

It is reported that there are no barriers to EMS personnel participating in the delivery of traffic safety in school and other public settings. Often these programs are organized on a local level and are not centrally tracked or monitored at a state level. EMS, law enforcement and fire personnel have powerful credibility with their local public when it comes to delivering safety messages. Having EMS personnel participate in this type of public education is both an opportunity to spread the word about safety and a chance for the public to meet and learn about EMS before dialing 911 in an emergency. Sometimes these educational sessions can be part of a formal curriculum such as a driver education course or it can be much more informal in





something like a "touch a truck" event at a local park on a Saturday morning. The public education program on naloxone administration was cited as a successful model that could be expanded or replicated for bicycle and pedestrian safety training. It was also reported that the KY Highway Safety office often provides statewide public messaging which could serve as a platform for involving EMS in information delivery.

**85. Does the State have EMS agencies that provide off road capability for crashes that occur on bike/pedestrian trails where an ambulance cannot gain access?**

**Current Practice**

While we commonly think about bicycle and pedestrian injuries as occurring along established roadways, most states, including Kentucky, have significant recreational bicycle and pedestrian activities in backcountry settings. These present challenges in terms of incident reporting, emergency response and appropriate transport. The management of off-road emergency response resources in Kentucky occurs at the local (mostly county based) PSAPs. Each PSAP knows the resources it has immediately available and there is also a KY Board of EMS requirement for "specialty service agreements". An essential element to support responses to backcountry emergencies is good mapping and GIS data. While the quality of this information varies today, most counties are improving their maps as they implement NG-911. As might be expected, backcountry emergency resources were reported as most robust in areas where they are often needed. An example of this was the Wolfe County Search and Rescue Team who was reported to have excellent capabilities for search and high angle rope rescue frequently required for evacuation from falls off of cliffs and into steep gorges. That group's website reported a recent response for a hiker with an injured leg. The rescue involved multiple low angle belays and had assistance from another wilderness EMS team as well as the county's ambulance service. This was a good example of a successful rescue that illustrates the necessity of multiple agencies with specialty capabilities and large numbers of staffing. While it sounds as if backcountry resources are well organized and available, it may be worth monitoring these responses to assure there is consistent availability of them across the Commonwealth.

**86. Is there a recognition program for EMS personnel where contributions to pedestrian and bicyclist safety can be acknowledged?**

**Not At This Time**

The Commonwealth of Kentucky does not currently have a recognition program where the contributions of EMS personnel to bicycle and pedestrian safety can be acknowledged. There is a voluntary recognition program for EMS agencies, under the EMS for Children's program, that meet certain requirements for pediatric emergency care capabilities. This is a great conceptual model for how such a bicycle and pedestrian recognition might work. Many states have annual recognition programs for EMT, Paramedic, Medical Director, EMS Educator, EMS agency and other system roles. While these awards are usually not uniquely for bicycle and pedestrian safety contributions, they can be used to recognize them. States who make the best use of their award programs structure them so there is publicity of what the recognitions are based on and encouragement of others to replicate the programs or behaviors. Some states have featured







their annual award recipients in recruitment/retention campaigns. These programs can encourage EMS personnel and agencies to stretch outside their traditional emergency response roles. They provide an opportunity to inform the public about the great work EMS personnel are doing. They demonstrate how extraordinary EMS efforts are being spotted and recognized by the Commonwealth. Usually these programs are inexpensive. A Commonwealth EMS personnel recognition program could be based in the KY Board of EMS, the KY Highway Safety Office or a professional partner such as the Kentucky Ambulance Providers Association.





## Appendix B – Recommendations with Linked Questions

The following is a complete list of recommendations provided by the Technical Assessment Team. Priority recommendations are listed in bold and associated questions are included when applicable.

### Program Management Recommendations

- **Appoint a Coordinator or Program Manager that is charged with development of a Pedestrian and Bicycle Strategic Safety Plan and a Pedestrian and Bicycle Safety Coalition. The Pedestrian and Bicycle Safety Coalition should be made up of a diverse group of state and local partners, stakeholders, and safety advocates and should be charged with implementation of the countermeasures identified in the plan. The people included in the assessment interviews would be a great place to start in considering potential coalition members.**
  - **Linked Question(s):**
    - 6. Is there a statewide group of multidisciplinary stakeholders that works with the lead agency to develop, implement and evaluate the PBSP?
- **Develop a stand-alone pedestrian and bicycle strategic safety plan that supports both the SHSP and the HSP. The pedestrian and bicycle strategic safety plan should be based on problem identification and provide guidance in development and implementation of education, enforcement, engineering, and emergency medical services proven effective countermeasures to enhance the safety of people who walk and bike.**
  - **Linked Question(s):**
    - 1. Does your State have a plan that describes its program to address pedestrian and bicyclist safety?
    - 2. Is the State's pedestrian and bicyclist safety program plan a component of another plan?
- **Utilize the Highway Safety Improvement Plan (HSIP) and Highway Safety Plan (HSP) to better support efforts to improve the safety of pedestrians and bicyclists at both the state and local level. Better communicating the availability of grant funding to local partners would be a good starting point for this effort. The KOHS should conduct an analysis of all crashes and determine what percentage of fatal and serious injuries are bicyclists and pedestrians, then apply that percentage of funding to projects that specifically address these crashes. There should be evaluation measures and methods included in each new project that is developed and should also be used to determine the level of progress and success of current projects. Consider utilizing NHTSA's Art of Appropriate Evaluation, AASHTO's Highway Safety Manual (HSM) and other effective evaluation tools to ensure that projects are accomplishing the goals they were put into place to accomplish.**
  - **Linked Question(s):**
    - 2. Is the State's pedestrian and bicyclist safety program plan a component of another plan?
    - 3. Does your State's Highway Safety Improvement Plan (HSIP) and Highway Safety Plan (HSP) include efforts that are aimed at reducing pedestrian and bicyclist injuries and fatalities?
    - 4. Is there a variety of funding resources used to adequately support efforts to reduce





pedestrian and bicyclist crashes, injuries and fatalities?

9. Is the Pedestrian and Bicyclist Safety Plan re-evaluated and updated and is this information shared with stakeholders and/or the public?

12. Does guidance exist for conducting program evaluation?

- **Develop a Pedestrian and Bicycle Strategic Safety Coalition that is charged with implementation of the Pedestrian and Bicycle strategic Safety Plan. It may be possible to expand and rebrand the Kentucky Bicycle and Bikeways Commission to include pedestrians. Possibly rename it the Kentucky Active Transportation Commission. It's imperative that this group include state, regional, and local partners, stakeholders, and advocacy groups.**

- **Linked Question(s):**

- 6. Is there a statewide group of multidisciplinary stakeholders that works with the lead agency to develop, implement and evaluate the PBSP?

- **Partner with law enforcement agencies, DMV, EMS and Trauma partners at the state and local level to develop a data warehouse that includes GIS mapping, identifies contributing factors in serious and fatal injury crashes, identifies the context of the community where the crashes are occurring such as areas of concern or areas with visually impaired pedestrians, the ages of people involved in the crashes, the time of day and day of week the crashes are occurring, and any cultural or language barriers that may be involved.**

**Equity and Accessibility: Track the demographics of who Kentucky is engaging with when doing community outreach, with the intention of understanding what communities are not being reached and developing more targeted approaches to address that gap.**

- **Linked Question(s):**

- 8. Does the lead agency and stakeholders group (if applicable) use data (e.g., crash, roadway, EMS, citation and adjudication) to identify the extent of the State's pedestrian and bicyclist safety crash problem, clarifying the who, where, when, and why of crashes as well as the crash outcomes?

- Implement a robust communication plan as part of its pedestrian and bicycle strategic safety plan. that this plan contains information pertaining to technological advances, and that this plan be disseminated to all state and local partners, stakeholders, advocacy groups, grantees, potential grantees, and anyone with a vested interest in safety.

- **Linked Question(s):**

- 7. Does the Pedestrian and Bicyclist Safety Program (PBSP) regularly communicate with stakeholders to inform them about the status of the PBSP, coordinate resources, and/or share best practices and other information?

- Modify the grant training currently provided to grantees to include state, regional, and local partners with a vested interest in safety. It should include technical assistance on the grant application process, program management, problem identification, and proven effective countermeasures. This provides an opportunity to expand the grant funded pedestrian and bicycle safety program to be a better representation of the state as a whole.

- **Linked Question(s):**





- 10. Does the State provide training and/or technical assistance on program management, problem identification, and countermeasures for stakeholders and grantees?
- Communicate funding information to all state and local partners including law enforcement, educators, and emergency medical services partners and technical assistance provided through the grant application process. To accomplish this, the KOHS might consider provide a series of meetings or roundtables across the state to encourage potential grantees to attend and learn more about the Highway Safety Grant Program. It would be helpful to provide resources such as sample applications, pre established problem identification for each area the meetings are conducted in, and the types of technical assistance that can be provided to grantees. Communication is key to encouraging new partnerships to help advance the statewide initiative.
  - Linked Question(s):
    - 4. Is there a variety of funding resources used to adequately support efforts to reduce pedestrian and bicyclist crashes, injuries and fatalities?
    - 10. Does the State provide training and/or technical assistance on program management, problem identification, and countermeasures for stakeholders and grantees?

### Education Recommendations

- **Kentucky's bicyclist and pedestrian safety education and outreach efforts should be based on creating a crash-data focused communications plan that includes target audiences for bicyclists, pedestrians, and motorists as well as key messages for each. In the absence of a designated lead agency, the Kentucky Highway Safety Office's new vulnerable roadway user program manager is an ideal candidate to lead this effort that should include input from state and local stakeholders, making sure to include non-traditional and multicultural partners in its development and implementation.**
  - **Linked Question(s):**
    - 16. Does your State have an education and public outreach (communications) plan focusing on bicyclist and pedestrian safety, which is included in a statewide traffic safety education and public outreach plan or another plan (e.g., Highway Safety Plan)?
    - 17. Does the State Highway Safety Office or designated lead agency for pedestrian and bicyclist safety use data to develop, evaluate and update this communications plan, and how often is it evaluated and updated, and by whom?
- **Conduct crash data analysis for both bicyclist and pedestrian safety that provides clear and easy-to-understand problem identification for the bicyclist, pedestrian, and motorist, and use this information to develop education and communication programs, including enforcement communications when and where it may be appropriate.**
  - **Linked Question(s):**
    - 17. Does the State Highway Safety Office or designated lead agency for pedestrian





and bicyclist safety use data to develop, evaluate and update this communications plan, and how often is it evaluated and updated, and by whom?

21. Does the pedestrian and bicyclist safety communication plan complement and support existing and planned high visibility pedestrian and bicyclist safety enforcement activities?

28. Are local level pedestrian and bicyclist safety education and outreach programs based on data?

- **Include engineering-based bicyclist and pedestrian safety applications into communications planning so that roadway users understand how to safely navigate as a driver, bicyclist, and/or pedestrian.**
  - **Linked Question(s):**
    - 20. Does the pedestrian and bicyclist safety communications plan complement and support existing and planned traffic engineering activities that address pedestrian and bicyclist safety?
    - 36. Are motorists, pedestrians, and bicyclists educated on new roadway engineering applications? If so, how?
- **Equity and Accessibility: Actively recruit members of the disability community, immigrant communities, low-income workers and youth who rely on active transportation to attend public meetings, workgroups, committees, etc. so they can actively engage in the planning process. This could help build connections between advocates and communities that are likely to be disproportionately represented in pedestrians and bicyclist deaths and serious injuries. Consider providing stipends, childcare, meals, transportation to underserved and people with mobility challenges ensure that communities that are often unable to participate in workgroups/committees have more equitable access.**
  - **Linked Question(s):**
    - 17. Does the State Highway Safety Office or designated lead agency for pedestrian and bicyclist safety use data to develop, evaluate and update this communications plan, and how often is it evaluated and updated, and by whom?
- Build on efforts that involve businesses in bicycle safety training and education efforts to also include pedestrian safety training and education for their employees.
  - **Linked Question(s):**
    - 29. Does your State and/or an organization(s) work with businesses to provide pedestrian and bicyclist safety education programs to their employees?
- Ensure communications planning, development, and implementation for bicyclist and pedestrian takes into account the need to be multicultural and multilingual to reflect the diversity of Kentucky's population.
  - **Linked Question(s):**
    - 34. Does the State provide multicultural/lingual pedestrians and bicyclists safety education?





- Develop learning-based bicyclist and pedestrian safety training and information for driver's education students and instructors. New drivers should understand how to drive safely around pedestrians and bicyclists, understand bicyclist and pedestrian rights and responsibilities, and appropriate driver actions at intersections, crosswalks, HAWK signals, and bike lanes.
  - Linked Question(s):
    - 30. Does the State have a driver education course and does it include information on pedestrian and bicyclist safety?
    - 33. Is pedestrian and bicyclist safety training, resources and information provided to driver education professionals?
- Equity and Accessibility: Continue to build relationships with disability advocacy organizations and service providers to ensure that individuals who have accessibility needs know how to make requests for improvements.
  - Linked Question(s):
    - 19. Is this communication plan implemented with the help of a multidisciplinary group of stakeholders that includes non-traditional and/or multicultural partners?

#### Enforcement Recommendations

- **Develop a law enforcement policy supporting both pedestrian and bicyclist safety.**
  - **Linked Question(s):**
    - 40. Are law enforcement agency policies in place supporting both pedestrian and bicyclist safety?
- **Identify and/or cultivate an in-state law enforcement expert surrounding bicycle and pedestrian safety.**
  - **Linked Question(s):**
    - 37. Are law enforcement personnel specifically trained to investigate crashes involving pedestrians or bicyclists?
    - 41. Are law enforcement personnel trained in both pedestrian and bicyclist safety, to include relevant State laws?
- **Institute a statewide method and timeline of communication to share bicyclist and pedestrian safety information (e.g., newsletters, training bulletins, roll call videos, and on-line training modules).**
  - **Linked Question(s):**
    - 40. Are law enforcement agency policies in place supporting both pedestrian and bicyclist safety?
    - 41. Are law enforcement personnel trained in both pedestrian and bicyclist safety, to include relevant State laws?
- **Incorporate bicyclist and pedestrian scenario training into law enforcement field training and evaluation programs (recruit training).**





- **Linked Question(s):**
  - 41. Are law enforcement personnel trained in both pedestrian and bicyclist safety, to include relevant State laws?
- **Reevaluate if bicyclist and pedestrian crash data supports enforcement efforts focusing on driver violations involving cellular phones, DUI enforcement in high pedestrian crash corridors, a the three-stage process of education, warning, and citing violators.**
  - **Linked Question(s):**
    - 40. Are law enforcement agency policies in place supporting both pedestrian and bicyclist safety?
    - 42. Are law enforcement personnel trained in effective measures to reduce both pedestrian and bicyclist crashes?
- **Once the evaluation has been completed, develop an action plan to both implement enforcement measures for reevaluation and adjustment (if necessary).**
  - **Linked Question(s):**
    - 42. Are law enforcement personnel trained in effective measures to reduce both pedestrian and bicyclist crashes?
- **Emphasize behavioral highway safety efforts.**
  - **Linked Question(s):**
    - 43. Do State and/or local law enforcement agencies conduct data analysis to identify where and why pedestrian and bicyclist-motor vehicle collisions occur and who is involved and use this analysis to develop and evaluate countermeasures?
    - 44. Do State and local law enforcement agencies conduct high visibility enforcement (HVE) at pedestrian and bicyclist-motor vehicle crash hot spots? Is HVE coupled with public outreach and education? Are the results captured and reported?
- **Utilize data to drive law enforcement education and enforcement efforts.**
  - **Linked Question(s):**
    - 43. Do State and/or local law enforcement agencies conduct data analysis to identify where and why pedestrian and bicyclist-motor vehicle collisions occur and who is involved and use this analysis to develop and evaluate countermeasures?
    - 44. Do State and local law enforcement agencies conduct high visibility enforcement (HVE) at pedestrian and bicyclist-motor vehicle crash hot spots? Is HVE coupled with public outreach and education? Are the results captured and reported?
- **Prioritize High Visibility Enforcement and Engagement specific to bicyclists and pedestrians and report activities to the Office of Highway Safety.**
  - **Linked Question(s):**
    - 43. Do State and/or local law enforcement agencies conduct data analysis to identify where and why pedestrian and bicyclist-motor vehicle collisions occur and who is involved and use this analysis to develop and evaluate countermeasures?
    - 44. Do State and local law enforcement agencies conduct high visibility enforcement (HVE) at pedestrian and bicyclist-motor vehicle crash hot spots? Is HVE coupled with





public outreach and education? Are the results captured and reported?

- **Require Law Enforcement Liaisons to take more of an active role with coordinating High Visibility Enforcement/Engagement campaigns and related training.**
  - **Linked Question(s):**
    - 40. Are law enforcement agency policies in place supporting both pedestrian and bicyclist safety?
    - 41. Are law enforcement personnel trained in both pedestrian and bicyclist safety, to include relevant State laws?
    - 42. Are law enforcement personnel trained in effective measures to reduce both pedestrian and bicyclist crashes?
    - 43. Do State and/or local law enforcement agencies conduct data analysis to identify where and why pedestrian and bicyclist-motor vehicle collisions occur and who is involved and use this analysis to develop and evaluate countermeasures?
    - 44. Do State and local law enforcement agencies conduct high visibility enforcement (HVE) at pedestrian and bicyclist-motor vehicle crash hot spots? Is HVE coupled with public outreach and education? Are the results captured and reported?
- **Appoint the in-state law enforcement expert onto the Vulnerable Road User Task Force.**
  - **Linked Question(s):**
    - 40. Are law enforcement agency policies in place supporting both pedestrian and bicyclist safety?
    - 45. Are State and local law enforcement agencies included in infrastructure improvement project identification and selection (e.g.; a road safety audit, intersection redesign, installation of new signals, crosswalks, bike boxes or lanes, pedestrian refuge islands)? Do they conduct enforcement and/or education activities following project completion?
- **Encourage traffic law enforcement professionals to partner with local roadway engineers as part of the problem identification process.**
  - **Linked Question(s):**
    - 45. Are State and local law enforcement agencies included in infrastructure improvement project identification and selection (e.g.; a road safety audit, intersection redesign, installation of new signals, crosswalks, bike boxes or lanes, pedestrian refuge islands)? Do they conduct enforcement and/or education activities following project completion?
- **Support the in-state law enforcement expert surrounding bicyclist and pedestrian safety to work with the Kentucky Association of Chiefs of Police and Kentucky Sheriffs' Association Legislative Committees to enhance automated enforcement technologies.**
  - **Linked Question(s):**
    - 40. Are law enforcement agency policies in place supporting both pedestrian and bicyclist safety?
    - 44. Do State and local law enforcement agencies conduct high visibility enforcement (HVE) at pedestrian and bicyclist-motor vehicle crash hot spots? Is HVE coupled with







public outreach and education? Are the results captured and reported?

46. Do State and/or local law enforcement agencies use automated enforcement (if allowed by law) and/or other technology (e.g., technology that measures safe passing distance such as C3FT to enforce safe passing laws, automated speed enforcement, red light cameras) to decrease pedestrian and bicyclist crashes? Do they issue an activity and/or impact report? Does State statutes allow for the use of automated enforcement?

- **Appoint the Traffic Safety Resource Prosecutor to the Vulnerable Roadway User Task Force.**

- **Linked Question(s):**

- 40. Are law enforcement agency policies in place supporting both pedestrian and bicyclist safety?

- 44. Do State and local law enforcement agencies conduct high visibility enforcement (HVE) at pedestrian and bicyclist-motor vehicle crash hot spots? Is HVE coupled with public outreach and education? Are the results captured and reported?

- 46. Do State and/or local law enforcement agencies use automated enforcement (if allowed by law) and/or other technology (e.g., technology that measures safe passing distance such as C3FT to enforce safe passing laws, automated speed enforcement, red light cameras) to decrease pedestrian and bicyclist crashes? Do they issue an activity and/or impact report? Does State statutes allow for the use of automated enforcement?

- **Appoint Biking/Walking advocacy groups to the Vulnerable Roadway User Task Force.**

- **Linked Question(s):**

- 42. Are law enforcement personnel trained in effective measures to reduce both pedestrian and bicyclist crashes?

- 47. Do State and local law enforcement agencies partner with walking and biking organizations and/or advocates to address non-motorist safety?

- **Develop a bicyclist and pedestrian training curriculum authored under a collaborative approach including advocacy, engineering, and law enforcement.**

- **Linked Question(s):**

- 41. Are law enforcement personnel trained in both pedestrian and bicyclist safety, to include relevant State laws?

- 42. Are law enforcement personnel trained in effective measures to reduce both pedestrian and bicyclist crashes?

- 47. Do State and local law enforcement agencies partner with walking and biking organizations and/or advocates to address non-motorist safety?

- **Prioritize bicyclist and pedestrian safety materials for law enforcement to distribute during High Visibility Enforcement campaigns and community safety events.**

- **Linked Question(s):**

- 44. Do State and local law enforcement agencies conduct high visibility enforcement (HVE) at pedestrian and bicyclist-motor vehicle crash hot spots? Is HVE coupled with public outreach and education? Are the results captured and reported?





49. Are pedestrian and bicyclist safety educational materials (e.g., brochure, posters, flyers, sticker, pocket guides, coloring books) available for officer use during a traffic stop; an interaction with a pedestrian, bicyclist or motorist; or in conjunction with a school visit or community event?

- **Develop, through the Vulnerable Roadway User Task Force, a program to recognize law enforcement for exemplary achievements in addressing bicyclist and pedestrian safety.**
  - **Linked Question(s):**
    - 51. Does your State have a program to recognize law enforcement for exemplary achievements in addressing both pedestrian and bicyclist safety?
- Encourage the Vulnerable Roadway User Task Force to partner with a university to pilot a bicyclist and/or pedestrian ticket diversion program.
  - **Linked Question(s):**
    - 50. Does your State or a local jurisdiction have a ticket diversion program or a written warning initiative for pedestrians, bicyclists and/or motorists that violate traffic laws?

### Engineering Recommendations

- **Make the Pedestrian and Bicycle Coordinator a higher-level engineering position to provide more stability in the position and program, and increase the bicycle/pedestrian program budget**
  - **Linked Question(s):**
    - 53. Is there a Department of Transportation unit, program or policy specifically focused on pedestrian and bicyclist safety?
- **Create a program to collect pedestrian & bicycle count/exposure information program to evaluate nonmotorized system needs.**
  - **Linked Question(s):**
    - 58. Does the State have a policy that requires equity in transportation investment and programs with a focus on the underserved?
    - 62. Does the State use data to identify and address systemic issues and high crash locations?
    - 63. Does the State have a data warehouse that is used to access and share data and information among key stakeholders such as law enforcement, health providers and institutions, educators, researchers, and transportation and transit providers?
- **Revise the Highway Design Manual for improved pedestrian and bicycle facilities when updating the 2002 Pedestrian and Bicycle Travel Policy to provide more stringent requirements to provide pedestrian and bicycle facilities and instead make it a design exception to not provide facilities for pedestrians and bicyclists.**
  - **Linked Question(s):**
    - 56. Does the State have a policy that requires consideration to accommodate the safe movement of pedestrians and bicyclists in all roadway project planning, design and/or maintenance?
    - 60. Does the State have its own bicycle and pedestrian roadway design manual or use





a standard (national) design guide that establishes guidance and standards for pedestrians and bicyclists?

- **Explore additional Engineering countermeasures for pedestrians and bicyclists such as Pedestrian Hybrid Beacons (formerly known as HAWKs) on the state highway system for safer crossings of busy/wide, higher speed streets; and the use of Flashing Yellow Arrows to call a protected left-turn phase across a conflicting crosswalk when a pedestrian actuation occurs on a cycle-by-cycle basis where left turn phasing exists and conflicts between left-turning vehicles and pedestrians occur. Provide APS pushbuttons when LPI is installed at traffic signals (along with No Turn On Red signs.) Explore the use of protected bike lane facilities.**
  - **Linked Question(s):**
    - 54. Does the DOT pedestrian and bicyclist safety unit, program or policy provide guidance on identification, selection, and implementation of engineering focused countermeasures?
    - 60. Does the State have its own bicycle and pedestrian roadway design manual or use a standard (national) design guide that establishes guidance and standards for pedestrians and bicyclists?
    - 66. Does the State have an engineering and/or educational program addressing safe walking and bicycling routes to transit? That links transit and bicycles?
    - 68. Does the State have its own roadway design manual, guidance or statement for following national standards and regulations for the design, construction and maintenance of pedestrian and bicycle facilities?
- **Explore the development of a Safe Routes to Transit educational plan and conduct safety studies for crossing countermeasures at transit crossings at non-signal locations. Many pedestrian crashes involve crossing to and from transit, yet the link between pedestrian crashes and transit is not well known. This link should be explored.**
  - **Linked Question(s):**
    - 58. Does the State have a policy that requires equity in transportation investment and programs with a focus on the underserved?
    - 67. Does State roadway infrastructure development and prioritization include consideration of pedestrian and bicyclist accommodation and safety?
- **Work with and encourage local agencies to adopt a Complete Streets policy once the state policy is finalized and adopted, targeting primarily the urban areas. At the same time rural areas should not be ignored for complete street opportunities, especially for new or retrofit projects.**
  - **Linked Question(s):**
    - 57. Does the State have a Complete Streets policy or guidance for reconstruction/rehabilitation projects on portions of State highways that serve as main streets in small communities?
    - 58. Does the State have a policy that requires equity in transportation investment and programs with a focus on the underserved?
- **Equity and Accessibility: Increase focus on walking and rolling access for students. Not every family has reliable access to a vehicle and can provide transportation, and by making it safe and possible**





**for children to transport themselves to school, Kentucky would not only encourage the development of safe walking, rolling and biking habits, it would allow children who may not otherwise be able to participate in afterschool activities because of lack of transportation, the ability to do so.**

- **Linked Question(s):**
  - 58. Does the State have a policy that requires equity in transportation investment and programs with a focus on the underserved?
  - 67. Does State roadway infrastructure development and prioritization include consideration of pedestrian and bicyclist accommodation and safety?
- **Equity and Accessibility: Continue to coordinate with local jurisdictions to support their transition plans to ensure they are also moving actively towards ADA compliance in the public right of way.**
  - **Linked Question(s):**
    - 58. Does the State have a policy that requires equity in transportation investment and programs with a focus on the underserved?
- **Equity and Accessibility: Conduct an analysis similar to the work in Washington DC to understand the equity implications of where crashes are going unreported, and to adjust resource allocation as needed based on the findings of this research.**  
**Another option could be a pilot similar to the “near miss” study conducted through traffic cameras in Bellevue, Washington that measures where collisions and near misses occur through AI analysis of traffic camera footage, though this approach does require a network of traffic monitoring cameras at intersections. <https://www.togetherforsaferroads.org/transformational-analytics/>**
  - **Linked Question(s):**
    - 58. Does the State have a policy that requires equity in transportation investment and programs with a focus on the underserved?
    - 59. Does traffic engineering have a process to gather input on project planning, design and/or maintenance from stakeholders, interest groups and/or the public?
    - 67. Does State roadway infrastructure development and prioritization include consideration of pedestrian and bicyclist accommodation and safety?
- **Equity and Accessibility: Track and analyze additional demographic data of the crash victims and of the census block areas where the crashes occur to understand and begin to address systemic inequities that can be revealed with this more complete analysis.**  
**Analyze bike/walk/drive categories to think about how users with different identities, abilities and access to resources can feel safe and comfortable using different modes in the transportation system.**
  - **Linked Question(s):**
    - 58. Does the State have a policy that requires equity in transportation investment and programs with a focus on the underserved?
- Explore the reporting practices of minor or non-injury pedestrian and bicycle crashes throughout the state since these may not be consistently reported. It would be desirable to conduct a study to identify how many and where these are occurring to obtain a complete crash picture for pedestrian bicycle crashes. This may be an ideal LTAP research project.





- Linked Question(s):
  - 55. Does DOT traffic engineering partner with local transportation agency engineering departments as well as State and local education and enforcement agencies to address pedestrian and bicyclist safety? Is there a traffic engineering partnership through the Local Technical Assistance Program (LTAP) that incorporates pedestrian and bicycle safety programs and designs into roadway projects?
  - 62. Does the State use data to identify and address systemic issues and high crash locations?
- Be prepared for the possible adoption of PROWAG in 2022, (the primary issue may be the use of APS pushbuttons at traffic signals) as well as the next editions of the AASHTO Bike Design Guide, and the AASHTO Pedestrian Guide for the Planning, Design and Operation of Pedestrian Facilities, as well as and the next edition of the MUTCD, which may result in changes to the Kentucky Highway Design Manual and operational procedures.
  - Linked Question(s):
    - 58. Does the State have a policy that requires equity in transportation investment and programs with a focus on the underserved?
    - 60. Does the State have its own bicycle and pedestrian roadway design manual or use a standard (national) design guide that establishes guidance and standards for pedestrians and bicyclists?
- Equity and Accessibility: Collect more detailed demographic data on the mobility needs and demographics of nondrivers, who are most likely to be walking/rolling/biking in places that lack safe or developed pedestrian and bike infrastructure. Many conversations emphasized that Kentucky is a very rural state, but it is critical to understand the mobility needs of rural residents as well, especially those who may not have access to a car or driving.
  - Linked Question(s):
    - 58. Does the State have a policy that requires equity in transportation investment and programs with a focus on the underserved?
- Equity and Accessibility: Continue employment DEI work to ensure there are pathways for women and minorities to not only be hired and retained, but to become part of leadership and decision-making bodies.
  - Linked Question(s):
    - 58. Does the State have a policy that requires equity in transportation investment and programs with a focus on the underserved?
- Equity and Accessibility: Support Lexington in their work towards adopting a complete streets policy, and ensure the policy includes an environmental justice analysis so that gaps in existing infrastructure and unsafe road conditions can be understood in the context of historic under-investments, and that resources will be allocated to prioritize addressing these inequities.
  - Linked Question(s):
    - 57. Does the State have a Complete Streets policy or guidance for reconstruction/rehabilitation projects on portions of State highways that serve as main streets in small communities?





- **Equity and Accessibility:** Formalize a way to include latent demand measurements in planning and prioritization to go beyond who is currently using the system with bike/ped counts to who would want to use active transportation if they felt safe and comfortable doing so.
  - **Linked Question(s):**
    - 59. Does traffic engineering have a process to gather input on project planning, design and/or maintenance from stakeholders, interest groups and/or the public?

### Emergency Medical Services Recommendations

- **Establish an EMS plan that includes trauma, injury prevention, data sharing, public education or other goals and objectives relevant to pedestrian and bicycle safety.**
  - **Linked Question(s):**
    - 69. Does the State have a current EMS Plan and, if so, is pedestrian and bicyclist safety addressed in that plan?
- **Engage the Kentucky Injury Prevention and Research Center to establish a focus on bicycle and pedestrian injuries as a way of informing planning, enforcement, infrastructure, and EMS in their efforts to eliminate these injuries. Invest in their ability to combine all of the relevant data systems.**
  - **Linked Question(s):**
    - 78. Does the State have a statewide Injury Surveillance System (ISS) that captures EMS and other data, and is the ISS publicly accessible and integrated with the crash database?
- **Identify forums where local EMS agencies can come together with their counterparts in law enforcement, infrastructure, user groups, and other stakeholders to participate in planning, education and other steps to improve bicycle and pedestrian safety. This could be during road safety audits, through the Kentucky Injury Prevention Research Center, as part of a periodic Lifesavers Conference or some other mechanism.**
  - **Linked Question(s):**
    - 83. Do State injury prevention and local EMS agencies partner with law enforcement to address non-motorist safety? Do they partner with DOT and/or local government roadway agencies?
- Continue the efforts already in progress to complete implementation of NG 911 capabilities.
  - **Linked Question(s):**
    - 71. Is the State working to implement Next Generation 9-1-1 (NG-9-1-1)?
- Assess entering the EMS Compact as an expedited means of sharing EMS personnel across state borders.
  - **Linked Question(s):**
    - 72. Does the State prepare and educate EMS personnel using the current version of the National Emergency Medical Services Education Standards?
- Establish automated reports from the KSTARS system for EMS personnel, their employer agencies, and medical directors that give feedback about trauma and injury care including bicycle and





pedestrian related injuries.

- Linked Question(s):
  - 76. Is NEMSIS data used to assess the quality of EMS provider performance?
- Continue efforts to integrate KSTARS EMS data with trauma registry data to give the most complete picture of trauma care within Kentucky.
  - Linked Question(s):
    - 77. Does the State have a trauma registry?
- Identify a bystander care training program that can be deployed for statewide use by EMS agencies, law enforcement, fire departments, trauma centers and other stakeholders. As part of selecting and distributing a bystander care training program, identify a way to monitor how often courses are taught, where, and to how many people. The Kentucky trauma centers and Kentucky Highway Safety Office may be able to support this step financially and with other resources.
  - Linked Question(s):
    - 79. Does the State have a public education and outreach program promoting bystander care?
- The Kentucky legislature should be encouraged to pass legislation that exempts all persons who voluntarily attempt to assist with trauma or medical emergencies from liability associated with adverse outcomes.
  - Linked Question(s):
    - 80. Does the State have a Good Samaritan law that provides immunity to volunteers or bystanders that provide lifesaving assistance to a crash victim?
- Assure the integration of AACN technologies with ongoing efforts to implement NG 911 capabilities.
  - Linked Question(s):
    - 81. Is the State’s 9-1-1 call center(s) or public safety answering points (PSAPs) able to receive data from Advanced Automatic Collision Notification (AACN) technologies such as OnStar® when a crash occurs? Do they have the capability to interface with apps such as Good Samaritan?
- Integrate crash/injury reporting into any future implementation of street level cameras for other traffic control or related purposes.
  - Linked Question(s):
    - 82. Are street-level traffic cameras monitored to detect and dispatch EMS to the scene of pedestrian and bicycle crashes?
- Identify and publicize the ways EMS personnel and agencies can participate in traffic safety education. Encourage local linkages with school and community based programs. Build a simple reporting mechanism so information about where, how often and how many people have been touched by these trainings can be centrally collected and reported.
  - Linked Question(s):
    - 84. Are EMS personnel permitted and or encouraged to deliver traffic safety education at school and community-based settings? And if so, do they?
- Use the KSTARS information system to produce an annual report on backcountry EMS responses.





Look particularly at response times and where the resources came from to identify where new capabilities should be located and confirm that off road bicycle and pedestrian injuries are receiving timely and appropriate care.

- Linked Question(s):
  - 85. Does the State have EMS agencies that provide off road capability for crashes that occur on bike/pedestrian trails where an ambulance cannot gain access?
- Establish an annual recognition program for EMS personnel that can be used to recognize contributions to bicycle and pedestrian safety. Try to go beyond a one time event and structure a program that enables and encourages other EMS personnel to replicate or adapt whatever the persons being recognized are doing
  - Linked Question(s):
    - 86. Is there a recognition program for EMS personnel where contributions to pedestrian and bicyclist safety can be acknowledged?







## Appendix C – Participants

### State Highway Safety Office Representative

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Kentucky Transportation Cabinet

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### Participating Agencies

Bike Walk Kentucky/Horseys Hundred  
Bluegrass Cycling Club  
Hazard Police Department  
KYTC Division of Planning  
KYTC Division of Traffic Operations  
KYTC Highway Safety Improvement Program  
KYTC Multi-Modal Program Branch  
KYTC Office of Highway Safety  
KYTC Office of Local Programs  
Kentuckians For Better Transportation  
Kentucky Better Bikeway Commission  
Kentucky Bicycle and Bikeway Commission  
Kentucky Board of Emergency Medical Services  
Kentucky Cabinet for Health and Family Services, Department for Public Health  
Kentucky Office of Homeland Security, KY 911 Services Board  
Kentucky State Police  
Kentucky Transportation Cabinet (KYTC)  
Lake Cumberland District Health Department  
Lexington Department of Environmental Quality and Public Works  
Lexington-Fayette Urban County Government  
Louisville Metro Government  
Louisville Police Department  
Norton Healthcare  
University of Kentucky





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