

Resources and Tools to Improve Pedestrian Safety

Task 2 Report

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Prepared for:

MONTANA DEPARTMENT OF TRANSPORTATION
in cooperation with the
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

November 2023

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1 INTRODUCTION

Pedestrian fatalities are both increasing in absolute numbers (with 6,516 pedestrian deaths in 2020) and as a percentage of all roadway fatalities (Insurance Institute for Highway Safety, 2022; National Highway Traffic Safety Administration, 2022; Sandt et al., 2020; Schneider, 2020). Pedestrian deaths increased 59% between 2009 and 2020 while other deaths from motor vehicle crashes grew by 9% over the same time period (Insurance Institute for Highway Safety, 2022). Transportation stakeholders are uniquely positioned to lead efforts to improve pedestrian safety. However, whether stakeholders engage in effective strategies to improve pedestrian safety is influenced by their traffic safety culture – their shared values and beliefs.

While pedestrian safety is found in many strategic highway safety plans across the country, there may be potentially competing values and beliefs that influence the deployment of effective pedestrian safety strategies. Values such as prioritizing traffic flow and efficiency may influence planning, prioritization, and design efforts (Sandt et al., 2016). Further, beliefs about support (or lack of support) for pedestrian strategies may be influencing the deployment and implementation of effective strategies to improve pedestrian safety. Therefore, understanding shared values and beliefs among transportation stakeholders about pedestrian safety is critical to growing a positive traffic safety culture, deploying effective strategies to improve pedestrian safety, and ultimately achieving our nation’s goal of zero deaths on our roadways.

This project seeks to improve pedestrian safety by developing resources to assess and grow beliefs among transportation stakeholders to support deployment of effective pedestrian safety strategies. This report summarizes Task 2 of this project. The purpose of Task 2 is to design and implement a survey of stakeholders to reveal beliefs about pedestrian safety and their understanding, support for, and engagement in strategies.

2 METHODOLOGY

The Center for Health and Safety Culture developed and conducted a survey with current traffic safety stakeholders to reveal beliefs about pedestrian safety and their understanding, support for, and engagement in pedestrian safety strategies. Based on the review of literature, we designed the survey to focus on the following topics:

- Prioritization of pedestrian safety,
- Beliefs about a safe system for pedestrians,
- Current approaches to pedestrian safety,
- Familiarity, support for, and use of best practices to improve pedestrian safety,
- Getting public input,
- Use of the Complete Streets approach,
- Valued resources used by practitioners.

A copy of the survey is provided in Appendix A. The Montana State University Institutional Review Board (IRB) reviewed and approved the survey. We administered the survey online using Qualtrics, an online survey platform.

The lead researcher sent an email to Traffic Safety Culture Pooled Fund members across the United States asking for their help and support to recruit a variety of stakeholders in their state to complete a brief survey. The Traffic Safety Culture Pooled Fund members were asked to send an email to people who they may know (or people who may recognize them by their role) to request their participation in the survey. Email recruitment language was provided (Appendix B).

The Traffic Safety Culture Pooled Fund Members were asked to reach out to the following people in their state: state Department of Transportation (DOT) employees (leaders, engineers, behavioral safety), city/county DOT/public works employees (engineers, planners), metropolitan and rural planning organization (MPO/RPO) employees, public health people working on traffic safety/injury prevention, and pedestrian advocacy groups and anyone they felt has an interest and stake in pedestrian safety.

Data collection occurred between September 19, 2023 and October 19, 2023. A total of 399 surveys were completed. Upon further review, 63 surveys did not include any responses besides the organization type and role. These were removed from analysis, leaving 336 surveys that are summarized in this report.

2.1 Organization and Role of Participants

Survey participants were from 12 states (Idaho, Illinois, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Montana, Texas, Utah, Vermont, and Washington). Table 1 summarizes the organizations of the participants; Table 2 summarizes their role. Advocacy organizations included bicycle and pedestrian safety, public safety, workplace safety, and community engagement and representation. Other organizations included local government, education, consultants, emergency medical services, law enforcement, and transit authorities.

Table 1. Organizations of Survey Respondents

Organizations	Number of Respondents	Percent
state Department of Transportation (DOT)	171	50.9
city/county department of transportation/public works	34	10.1
planning organization (MPO, RPO, etc.)	33	9.8
public health	24	7.1
advocacy organization	19	5.7
Other	55	16.4
Total	336	100.0

Table 2. Roles of Survey Respondents

Role	Number of Respondents	Percent
engineer	125	37.2
planner	67	19.9
behavioral traffic safety specialist/manager/leader	36	10.7
public health advocate/educator	22	6.5
public health leader/policy maker	12	3.6
advocate	15	4.5
other	58	17.3
missing (unknown)	1	0.3
Total	336	100.0

3 RESULTS

The results present relative frequency responses for each of the survey topics:

- Prioritization of pedestrian safety,
- Beliefs about a safe system for pedestrians,
- Current approaches to pedestrian safety,
- Familiarity, support for, and use of best practices to improve pedestrian safety,
- Getting public input,
- Use of the Complete Streets approach.

The final question was an open-ended question asking for three resources that are “most valuable in improving pedestrian safety.” The responses included both strategies (e.g., enforcement) and resources (e.g., Complete Streets Guide).

The survey included 76 individual questions (of which 13 were conditionally asked based on the response of a previous question). Most respondents (84.8%) completed all questions that they were asked.

3.1 Prioritization of Pedestrian Safety

How the safety of pedestrians is prioritized within an organization can influence the actions taken to improve pedestrian safety (Sandt et al., 2016). The survey asked three questions to explore the prioritization of safety by various organizations. For each question, prioritization was rated on a five-point scale from 1 (low) to 5 (highest).

- Most respondents (79.1%) indicated that, based on what their organization *says*, the safety of pedestrians was a high (or the highest) priority.
 - However, when asked based on what their organization *does*, only half (50.1%) reported the safety of pedestrians was a high (or the highest) priority.
 - On average, based on what the organization does, respondents associated with public health rated their organization lower on pedestrian safety ($M = 2.50$, $SD = 1.06$) compared to everyone else ($M = 3.39$, $SD = 1.03$).
- When asked about their perceptions of how organizations prioritized the safety of pedestrians:
 - 47.6% indicated pedestrian safety was a high (or highest) priority of their state’s Department of Transportation (DOT).
 - On average, respondents associated with the state DOT reported a higher prioritization ($M = 3.52$, $SD = 0.90$) compared to everyone else ($M = 2.90$, $SD = 1.21$). That is, those within the state DOT perceived greater prioritization by the DOT than everyone else.
 - 30.3% indicated pedestrian safety was a high (or highest) priority of most local departments of transportation/public works in their state.
 - 41.0% indicated pedestrian safety was a high (or highest) priority of most municipal planning organizations (MPOs) or rural planning organizations (RPOs) in their state.

Based on these responses, there may be opportunities within organizations to clarify the discrepancy between the organization's espoused values (i.e., what they say are priorities) versus actual practices. Exploring these discrepancies may increase practices that improve pedestrian safety.

Furthermore, there may be opportunities to increase the prioritization of pedestrian safety among some agencies (e.g., public health) and grow shared values about pedestrian safety across agencies.

3.2 Beliefs About a Safe System for Pedestrians

Growing a safe transportation system includes improving safety for all road users. Fundamental to the Safe System Approach (SSA) is shared responsibility and accountability to road users most likely to be injured (see <https://highways.dot.gov/safety/zero-deaths>). The survey asked two questions to explore these beliefs.

- When asked about levels of responsibility for the safety of pedestrians, respondents indicated that many stakeholders were very or extremely responsible:
 - the pedestrians themselves: 58.2%
 - design engineers: 78.3%
 - planners: 74.2%
 - system owners (e.g., the state, county, city): 74.8%
 - elected officials: 45.3%
 - advocacy organizations: 48.3%
- Most respondents (89.3%) agreed that a transportation system should be designed and operated to account for and accommodate the users most likely to be injured. However, some did not perceive similar levels of agreement among other stakeholders.
 - 22.0% perceived that most leaders in their organization would not agree (either disagree or neither agree nor disagree).
 - 28.3% perceived that their state's Department of Transportation (DOT) would not agree.
 - 38.7% perceived that most local departments of transportation/public works in their state would not agree.
 - 29.1% perceived that most planning organizations (MPOs, RPOs) in their state would not agree.
 - 63.3% perceived that most elected officials in their state would not agree.

Many respondents indicated that responsibility for pedestrian safety was shared; however, there may be opportunities to grow these beliefs and thereby motivate more engagement in practices to improve pedestrian safety.

Furthermore, some respondents perceived that their leaders would not agree that the transportation system should be designed and operated to account for users most likely to be injured and did not perceive agreement in other organizations. Growing agreement to accommodate vulnerable road users may increase use of practices to improve pedestrian safety.

3.3 Current Approaches to Pedestrian Safety

We explored whether agencies were changing their approaches to pedestrian safety by asking two questions.

- About two-thirds of the respondents (64.2%) indicated their agencies were changing their approaches to pedestrian safety while about one in seven (13.6%) indicated they were focused on strategies they have used in the past.
- Over half of the respondents (61.3%) indicated that pedestrian safety was integrated throughout their programmatic areas while about one in five (19.5%) indicated it was isolated or siloed.
- About two-thirds of the respondents (68.6%) indicated their agencies were investing/spending more on pedestrian safety (31.4% indicated their agencies were spending the same or less).

Growing beliefs that organizations are changing their approaches to pedestrian safety, including integrating pedestrian safety throughout programmatic areas and increasing investments, may make it more likely that other organizations also adopt these changes.

3.4 Familiarity of, Support for, and Use of Best Practices

The Federal Highway Administration (FHWA) has identified several practices with evidence of improving pedestrian safety (see <https://highways.dot.gov/safety/pedestrian-bicyclist/step>). We asked four questions about these practices including the respondent’s familiarity with the practice, their perception as to whether the practice improves safety (i.e., perceived efficacy of the practice), perception of support from leadership within their organization for the practice (i.e., perceived injunctive norms), and their perception of how often the practices are used.

Table 3. Beliefs About and Use of Best Practices

Best Practice	Familiarity¹	Improve Pedestrian Safety²	Leadership Support³	Use⁴
medians and pedestrian refuge islands	78.3%	87.4%	52.6%	27.5%
separating pedestrians from the roadway	77.3%	87.7%	59.1%	32.7%
road diets (roadway configuration)	70.5%	79.9%	47.8%	20.4%
crosswalk visibility enhancements	69.8%	88.4%	63.6%	49.3%
reducing speeds in areas where pedestrians cannot be separated from the roadway	67.3%	76.7%	44.5%	18.7%
rectangular rapid flashing beacons	66.1%	74.1%	50.2%	29.2%
raised crosswalks	63.1%	72.2%	32.6%	10.9%
pedestrian hybrid beacons	62.4%	73.0%	44.0%	22.5%
leading pedestrian interval	50.2%	67.9%	39.5%	16.9%

¹Very or extremely familiar; ²Somewhat or strongly agreed; ³Very or extremely support; ⁴Use often or very frequently.

Overall, respondents indicated relatively high levels of familiarity and perceptions of efficacy of the practices (i.e., the practices are effective at improving pedestrian safety) and lower levels of perceived support by leadership and use. This indicates there may be opportunities to increase use of these practices by growing supportive beliefs and clarifying expectations by leadership.

Levels of familiarity were lower among those associated with public health. Averaging across the nine practices, 45.5% of those associated with public health reported high levels of familiarity with the practices (i.e., very or extremely familiar) compared to 68.9% among everyone else. There may be a need to provide education to those in public health about these strategies.

Furthermore, perceptions of support by leadership most varied between those associated with a state DOT and everyone else for three practices: separating pedestrians, reducing speeds, and raised crosswalks (**Error! Reference source not found.**). Increasing support by leadership within DOTs may increase use of these practices.

Table 4. Beliefs About Support of Leadership for Three Practices

Best Practice	Leadership Support ¹ Among State DOT	Leadership Support ¹ Among Everyone Else
separating pedestrians from the roadway	55.1%	63.2%
reducing speeds in areas where pedestrians cannot be separated from the roadway	34.2%	54.9%
raised crosswalks	24.5%	41.0%

¹Very or extremely support.

3.5 Public Input

Getting input from the public is an important component of transportation efforts that seek to serve the needs of all road users (U.S. Department of Transportation Federal Highway Administration, 2023). The survey asked two questions about getting public input.

- Relatively few respondents indicated their own organization did very well or extremely well at getting public input. More specifically:
 - 33.6% indicated their organization does very or extremely well at getting input from people who may be potentially impacted by changes to the roadway system before starting designs.
 - 28.7% indicated their organization does very or extremely well at getting feedback on designs.
 - 17.6% indicated their organization does very or extremely well at trying small scale (sometimes temporary) changes so people can actually see and experience how a new design might work.

- Similarly, few respondents perceived that their state DOT did very well or extremely well at getting public input. Specifically,
 - 17.0% indicated their state DOT does very or extremely well at getting input from people who may be potentially impacted by changes to the roadway system before starting designs.
 - 17.7% indicated their organization does very or extremely well at getting feedback on designs.
 - 12.9% indicated their organization does very or extremely well at trying small scale (sometimes temporary) changes so people can actually see and experience how a new design might work.

Improving pedestrian safety is complex and resources are limited. Obtaining quality public input to inform the needs of the community and explore potential approaches may lead to better outcomes with limited funding. Organizations might consider partnering with other agencies who are skilled at public input approaches.

3.6 Complete Streets

The Complete Streets approach has been shown to improve pedestrian safety (Smart Growth America, 2023). We asked three questions about Complete Streets.

- About half of the respondents (51.6%) indicated that they were very or extremely familiar with the Complete Streets approach.
- About four in ten respondents (43.2%) indicated that their organization has a Complete Streets policy. Among those who reported their agency had a Complete Streets policy ($n=119$), the following indicated their policy was strong in:
 - establishing commitment and vision: 60.5%
 - applying to all projects and phases: 47.1%
 - adopting excellent design guidance: 45.4%
 - prioritizing underinvested and underserved communities: 37.0%
 - creating a plan for implementation: 37.0%
 - mandating coordination: 36.1%
 - setting criteria for choosing projects: 30.5%
 - allowing only clear exceptions: 28.6%
 - requiring proactive land-use planning: 23.5%
 - measuring progress: 18.5%

The Complete Streets approach provides a framework for stakeholders involved in roadway transportation to address the needs of all road users – including pedestrians. Establishing Complete Streets policies can codify policies and procedures that improve pedestrian safety. Growing the number of organizations with Complete Streets policies and improving the strength of the policies is one strategy to holistically improve pedestrian safety.

3.7 Valued Resources

Respondents were asked what three resources they found most valuable in improving pedestrian safety. **Error! Reference source not found.** lists the responses that were resources.

Table 5. Pedestrian Safety Resources Identified by Respondents

Resources
2021 AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities
America Walks
America Planning Association
American Association of Retired Persons (AARP) Walk Audit Tool Kit
Bike Walk Kansas City
Blue Zones
CDC's Walkability programs
Crash Modification Factor (CMF) Clearinghouse
Complete Streets Guide
FHWA Bicycle and Pedestrian Planning, Program, and Project Development Guidance
FHWA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations
FHWA Low-Cost Safety Countermeasures
FHWA Non-Motorized User Safety: A Manual for Local Rural Road Owners
FHWA Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations Final Report
FHWA's Safe Transportation for Every Pedestrian (STEP) programs and guidance
FHWA Vulnerable Road User Safety Assessment Guidance
Guidance for Installation of Pedestrian Crosswalk on Michigan State Trunkline Highways
Institute of Transportation Engineers (ITE) Traffic Calming Toolkit
Institute of Transportation Engineers (ITE) Transportation Planning Handbook
Kentucky Transportation Cabinet (KYTC) Complete Streets Manual
League of American Bicyclists
Manual of Uniform Traffic Control Devices
Minnesota's Best Practices for Pedestrian and Bike safety
Minnesota's Demonstration Project Guide
Minnesota's Facility Design Guide
Minnesota Department of Health Inclusive Walk Audit Facilitator's Guide
Minnesota Department of Health Let's Go for a Walk Guide
Minnesota Statewide Pedestrian System Plan
Minnesota's Best Practices for Pedestrian and Bicycle Safety (2021)
MnDOT's and Change Lab Solutions websites
MnDOT's pedestrian design guide (Chapter 8 of the facility design guide).
National Association of City Transportation Officials (NACTO) Bicycle Guide
National Association of City Transportation Officials (NACTO) Urban Street Design Guide
National Complete Streets Coalition
National Safe Routes Partnership
Guide for Pedestrian & Bicyclist Safety at Alternative and Other Intersections and Interchanges (NCHRP 948)
CROW Design Manual for Bicycle Traffic (Netherlands)
Pedestrian & Bicycle Information Center
Planetizen
Public Right-of-Way Accessibility Guidelines (PROWAG)
Smart Growth America
Safe Routes to School Plans
Safe Streets for All (SS4A)
Safe Systems Approach
Strong Towns
Traffic Incident Management Systems (TIMS)
Vision Zero

4 CONCLUSIONS

We developed and implemented a survey with pedestrian stakeholders to better understand six aspects components of traffic safety culture that may impact pedestrian safety. The respondents included engineers, planners, behavioral traffic safety professionals, public health advocates/educators/leaders, advocates, and others representing a variety of organizations including state and local departments of transportation, planning organizations, public health organizations, and advocacy organizations.

Based on the responses of the survey participants:

- There may be opportunities within organizations to clarify the discrepancy between the organization's espoused values (i.e., what they say are priorities) vs. actual practices regarding pedestrian safety. Exploring these discrepancies may increase practices that improve pedestrian safety.
- There may be opportunities to increase the prioritization of pedestrian safety among some agencies (e.g., public health) and grow shared values about pedestrian safety across agencies.
- Many respondents indicated that responsibility for pedestrian safety was shared; however, there may be opportunities to grow these beliefs and thereby motivate more engagement in practices to improve pedestrian safety.
- Some respondents perceived that their leaders would not agree that the transportation system should be designed and operated to account for users most likely to be injured and did not perceive agreement in other organizations. Growing agreement to accommodate vulnerable road users may increase use of practices to improve pedestrian safety.
- Most respondents indicated their organizations were changing how they approached pedestrian safety, efforts were becoming more integrated, and they were investing more. Growing beliefs that organizations are changing their approaches to pedestrian safety including integrating pedestrian safety throughout programmatic areas and increasing investments may increase these changes.
- Overall, respondents indicated relatively high levels of familiarity and perceptions of efficacy of nine best practices; however, they reported lower levels of perceived support by leadership for and use of these practices. This indicates there may be opportunities to increase use of these practices by growing supportive beliefs and clarifying expectations by leadership. Perceptions of support by leadership most varied between those associated with a state DOT and everyone else for three practices: separating pedestrians, reducing speeds, and raised crosswalks. Increasing support by leadership within DOTs may increase use of these practices.
- Many respondents rated their organizations low on how well they get public input to inform the needs of the community and explore potential approaches to improve

pedestrian safety. Similarly, respondents rated their state's DOT low. There are opportunities to improve practices for getting public input.

- About half of the respondents indicated that they were very or extremely familiar with the Complete Streets approach, and about four in ten respondents indicated that their organization has a Complete Streets policy. There are opportunities to grow knowledge about the Complete Streets approach and increase the number of organizations with Complete Streets policies.

In addition, the respondents identified a variety of resources that they find valuable to improve pedestrian safety.

It is important to note the limitations of these findings. These results only represent the beliefs of those who participated in the survey. The results cannot be generalized to others in their organizations, other organizations, their state, or other states. Nonetheless, the responses reveal potential opportunities as reported by these respondents about ways to improve shared values and beliefs that may improve pedestrian safety.

The next task of this project is to develop resources for stakeholders involved in pedestrian safety based on these results.

5 REFERENCES

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6 APPENDICES

6.1 Appendix A. Survey Questions

The following is the text of the survey. The survey was implemented online; therefore, this does not represent how the questions appeared to the respondent.

The Center for Health and Safety Culture, on behalf of the Transportation Pooled Fund on Traffic Safety Culture, is seeking your insights about pedestrian safety.

We are asking for your participation in this important, brief survey. The results will be used in a research project to develop resources for various stakeholders regarding pedestrian safety. We know your time is valuable, and we appreciate your participation.

Your participation is voluntary, and we will only share summary results. You can stop at any time. Your responses are confidential. This study has been approved by the Montana State University Institutional Review Board. If you have questions or comments about the survey, please contact Jay Otto with the Center for Health and Safety Culture at jayotto@montana.edu. If you have questions about your rights as a participant, you may contact the MSU IRB at irb@montana.edu

Proceeding with the survey indicates your consent to participate. Thank you for taking this survey!

Jay Otto (jayotto@montana.edu)

To begin, what best describes your organization?

- state department of transportation (DOT)
- city/county department of transportation/public works
- planning organization (MPO, RPO, etc.)
- public health
- advocacy organization (please specify focus of the organization)

other _____

What best describes your role?

- engineer
- planner
- behavioral traffic safety specialist/manager/leader
- public health advocate/educator
- public health leader/policy maker
- advocate
- other _____

Based on what your organization **says**, how is the safety of pedestrians prioritized?

- low priority
- somewhat of a priority
- moderate priority
- high priority
- highest priority

Based on what your organization **does**, how is the safety of pedestrians prioritized?

- low priority
- somewhat of a priority
- moderate priority
- high priority
- highest priority

In your opinion, how do the following organizations prioritize the safety of pedestrians? *Even if you are not sure, give your best guess.*

	low	somewhat	moderate	high	highest
your state's Department of Transportation (DOT)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
most local departments of transportation/public works in your state	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
most MPOs or RPOs in your state	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In your opinion, how responsible are the following for the safety of pedestrians?

	not at all	somewhat	moderately	very	extremely
The pedestrians themselves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Design engineers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Planners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
System owners (e.g., the state, county, city)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Elected officials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advocacy organizations in your state/community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

In your opinion, how much do the following agree or disagree with the statement: “A transportation system should be designed and operated to account for and accommodate the users most likely to be injured or seriously injured.” *Even if you are not sure, give your best guess.*

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
you	0	0	0	0	0
most leaders in your organization	0	0	0	0	0
your state’s Department of Transportation (DOT)	0	0	0	0	0
most local departments of transportation/public works in your state	0	0	0	0	0
most planning organizations (MPOs, RPOs) in your state	0	0	0	0	0
most elected officials in your state	0	0	0	0	0

How would you describe your organization's current approach to pedestrian safety? *Even if you are not sure, give your best guess.*

	1	2	3	4	5	
We focus on strategies we have used in the past	0	0	0	0	0	We are changing our approaches to pedestrian safety
Pedestrian safety is isolated or siloed	0	0	0	0	0	Pedestrian safety is integrated throughout our programmatic areas

How would you describe your organization’s current investment in/spending on pedestrian safety?

- Much less than in the recent past
- Somewhat less than in the recent past
- About the same
- Somewhat more than in the recent past
- Much more than in the recent past

How familiar are you with the following practices?

	Not familiar at all	Somewhat familiar	Moderately familiar	Very familiar	Extremely familiar
Crosswalk visibility enhancements	0	0	0	0	0
Leading pedestrian interval	0	0	0	0	0
Medians and pedestrian refuge islands	0	0	0	0	0
Pedestrian hybrid beacons	0	0	0	0	0
Rectangular rapid flashing beacons	0	0	0	0	0
Road diets (roadway configuration)	0	0	0	0	0
Raised crosswalks	0	0	0	0	0
Separating pedestrians from the roadway	0	0	0	0	0
Reducing speeds in areas where pedestrians cannot be separated from the roadway	0	0	0	0	0

How much do you agree or disagree that each of the following improves pedestrian safety?

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	I don't know
Crosswalk visibility enhancements	0	0	0	0	0	0
Leading pedestrian interval	0	0	0	0	0	0
Medians and pedestrian refuge islands	0	0	0	0	0	0
Pedestrian hybrid beacons	0	0	0	0	0	0
Rectangular rapid flashing beacons	0	0	0	0	0	0
Road diets (roadway configuration)	0	0	0	0	0	0
Raised crosswalks	0	0	0	0	0	0
Separating pedestrians from the roadway	0	0	0	0	0	0
Reducing speeds in areas where pedestrians cannot be separated from the roadway	0	0	0	0	0	0

To what degree do you think the leadership of your organization supports the use of these practices?

	Not at all	Somewhat	Moderately	Very	Extremely	I don't know
Crosswalk visibility enhancements	0	0	0	0	0	0
Leading pedestrian interval	0	0	0	0	0	0
Medians and pedestrian refuge islands	0	0	0	0	0	0
Pedestrian hybrid beacons	0	0	0	0	0	0
Rectangular rapid flashing beacons	0	0	0	0	0	0
Road diets (roadway configuration)	0	0	0	0	0	0
Raised crosswalks	0	0	0	0	0	0
Separating pedestrians from the roadway	0	0	0	0	0	0
Reducing speeds in areas where pedestrians cannot be separated from the roadway	0	0	0	0	0	0

When applicable, how often are these practices actually used?

	Never	Rarely	Sometimes	Often	Very frequently	I don't know
Crosswalk visibility enhancements	0	0	0	0	0	0
Leading pedestrian interval	0	0	0	0	0	0
Medians and pedestrian refuge islands	0	0	0	0	0	0
Pedestrian hybrid beacons	0	0	0	0	0	0
Rectangular rapid flashing beacons	0	0	0	0	0	0
Road diets (roadway configuration)	0	0	0	0	0	0
Raised crosswalks	0	0	0	0	0	0
Separating pedestrians from the roadway	0	0	0	0	0	0
Reducing speeds in areas where pedestrians cannot be separated from the roadway	0	0	0	0	0	0

How well do you think your organization does the following?

	Not well at all	Somewhat well	Moderately well	Very well	Extremely well
Gets input from people who may be potentially impacted by changes to the roadway system before starting designs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gets feedback on designs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tries small scale (sometimes temporary) changes so people can actually see and experience how a new design might work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Display This Question:

If To begin, what best describes your organization? != state department of transportation (DOT)

How well do you think your state's Department of Transportation (DOT) does the following?

	Not well at all	Somewhat well	Moderately well	Very well	Extremely well
Gets input from people who may be potentially impacted by changes to the roadway system before starting designs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gets feedback on designs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tries small scale (sometimes temporary) changes so people can actually see and experience how a new design might work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How familiar are you with the Complete Streets approach to planning, designing, building, operating, and maintaining streets?

- Not at all familiar
- Slightly familiar
- Moderately familiar
- Very familiar
- Extremely familiar

Does your organization have a Complete Streets policy?

- No
- Yes
- I don't know

Display This Question:

If Does your organization have a Complete Streets policy? = Yes

To what degree does your Complete Streets policy...

	Not at all	Somewhat	Moderately	Very	Extremely	I don't know
Establish commitment and vision	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prioritize underinvested and underserved communities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Apply to all projects and phases	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Allow only clear exceptions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mandate coordination	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adopt excellent design guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Require proactive land-use planning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Measure progress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Set criteria for choosing projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Create a plan for implementation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What three resources do you find most valuable in improving pedestrian safety?

Thanks so much for completing the survey!

6.2 Appendix B. Participant Recruitment

Pedestrian Stakeholder Survey 2023 – Recruiting emails

Email to Traffic Safety Culture Pooled Fund Board Member

As you may know, we (Center for Health and Safety Culture) are engaged in a pooled fund project to develop resources to assess and grow beliefs among stakeholders to support deployment of effective strategies to improve pedestrian safety. We shared with you the Task 1 Report (review of literature) and are now working on assessing beliefs among stakeholders by using a survey.

We need your help and support. Our goal is to get a variety of stakeholders in your state to complete a brief survey. Specifically, we are seeking participation by state DOT employees (leaders, engineers, behavioral safety), city/county DOT/public works employees (engineers, planners), MPO/RPO employees, public health people working on traffic safety/injury prevention, and pedestrian advocacy groups. We know this is a long list AND we learned in Task 1 that all these groups have an influence on improving pedestrian safety.

Getting people to complete surveys is challenging as we are all getting so many survey requests. We know that people are more likely to complete a survey if they perceive benefit and if they are asked by someone they know or can connect with. Therefore, we are asking for your assistance in “making the ask” to increase survey participation.

Our request: We are asking that you copy the text below and send an email to people who you may know (or people who may recognize you by your role) to request their participation in the survey. Please feel free to modify the text. We would also request you send a reminder in one week (reminder text is available below as well).

Specifically, we are asking that you reach out to the following in XX state:

- leaders, engineers, and safety specialists/program managers in your state’s DOT (if your behavioral safety efforts are handled by a separate agency like a department of public safety, please include them as well).
- leaders, engineers, and safety specialists in city or county departments of transportation or public works
- Any MPOs or RPOs
 - Particularly: XX (list specific MPOs in their state)
- Anyone in public health working on injury prevention
- Any pedestrian advocacy organizations in your state
- Anyone you feel has an interest and stake in pedestrian safety

Sending an email directly to individuals will increase participation.

We recognize this is a significant ask. We know that more people will respond if you ask them as opposed to us (whom they don’t know). And we know that the more people who complete the survey, the more we can learn about improving pedestrian safety.

Please do not hesitate to contact me with any questions or concerns.

Thanks so much for your time and your commitment to growing traffic safety culture!

IRB Protocol #2023-957

Email text for participants:

Subject: important input on pedestrian safety in our state

Hi [name],

I represent our state in the Pooled Fund on Traffic Safety Culture. Our state, along with others, is sponsoring a project to improve pedestrian safety – a safety concern in our state.

I am asking key stakeholders (engineers, planners, safety specialists, public health, advocacy organizations, etc.) for their input by completing a brief survey (8-10 minutes). Responses will be aggregated and analyzed to inform the development of resources that will be made available to us and others across the US.

I have two requests:

1. Complete the brief survey (8-10 minutes). You can use a desktop computer or mobile device. [link]
2. Share this email with others within your organization that are involved in any aspects of pedestrian safety (engineering, design, education, etc.).

Thank you so much for your consideration in helping us improve pedestrian safety in our state.

[your name]

IRB Protocol #2023-957

Reminder text for participants (one week later):

Subject: reminder on input on pedestrian safety in our state

As I mentioned in an email about a week ago, I represent our state in the Pooled Fund on Traffic Safety Culture, and we are sponsoring a project to improve pedestrian safety – a safety concern in our state.

I am sending this reminder to request you complete the brief survey and share the initial email with others within your organization who are involved in any aspects of pedestrian safety (engineering, design, education, etc.).

If you have already completed the survey – thank you so much! If you have not yet, here is the link:

[link]

You can use a desktop computer or mobile device.

You can also still forward this request to others.

Thank you so much for your consideration in helping us improve pedestrian safety in our state.

[your name]

IRB Protocol #2023-957