



Case Studies for FHWA
Pedestrian and Bicycle Focus
States and Cities







#### **Notice**

This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The U.S. Government assumes no liability for the use of the information contained in this document. This report does not constitute a standard, specification, or regulation. The U.S. Government does not endorse products or manufacturers. Trademarks or manufacturers' names appear in this report only because they are considered essential to the objective of this document.

### **Technical Documentation Page**

1. Report No. FHWA-SA-21-021	2. Government Accession No.	3. Recipient's Catal	log No.	
4. Title and Subtitle Case Studies for FHWA Pedestrian and Bicycle Fo	5. Report Date February 2021			
	6. Performing Organization Code			
7.Author(s) Tamara Redmon, Kara Peach, Catherine Chestnutt Lowry, and Dan Gelinne	8. Performing Organization Report No.			
9. Performing Organization Name and Address	10. Work Unit No.			
Vanasse Hangen Brustlin, Inc (VHB) 940 Main Campus Drive, Suite 500 Raleigh, NC 27606	11. Contract or Grant No.			
12. Sponsoring Agency Name and Address Federal Highway Administration Office of Safety 1200 New Jersey Ave., SE	13. Type of Report and Period Final Report, February 2021			
Washington, DC 20590	14. Sponsoring Agency Code FHWA			
15. Supplementary Notes The Contracting Officer's Task Manager (COTM)	was Tamara Redmon (FHWA C	Office of Safety).		
16. Pedestrian fatalities have been on the rise throubicycling, many agencies have been working to improvides information on how agencies have worker FHWA Pedestrian and Bicyclist Safety Focused Agencies	prove safety for both of these ro d with FHWA to improve pedes	ad users. This case	study document	
17. Key Words: Bicycle, biking, bike, walk, walking, safety, nonmotorized, non-motorized	18. Distribution Statement No restrictions.			
	0. Security Classif. (of this age) Unclassified	21. No. of Pages 36	22. Price	

Form DOT F 1700.7 (8-72) Reproduction of completed pages authorized

#### **Contents**

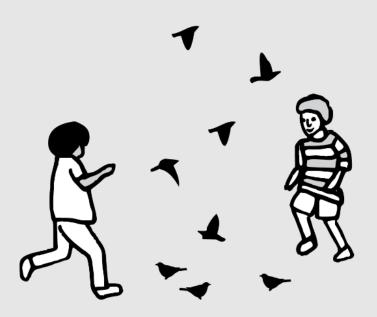
Introduction	1
Statewide Engagement to Support Pedestrian Safety in Arizona	3
Austin Develops a Pedestrian Safety Action Plan	7
California's Bicycle Improvement Monitoring Program	13
Statewide Engagement to Support Pedestrian Safety in Florida	17
Pedestrian Safety Training and Technical Assistance in Georgia	23
Statewide Engagement to Support Pedestrian Safety in New Mexico	27
Statewide Engagement to Support Pedestrian Safety in New York	31

### **Acknowledgment**

Development of this report required input from transportation agencies at the Federal, State, and local levels. The Federal Highway Administration (FHWA) and the authors greatly appreciate the cooperation of the staff from the City of Austin, Texas and the Arizona, California, Florida, Georgia, New Mexico, New York, and Texas Departments of Transportation.

### Introduction

Pedestrian fatalities have been on the rise throughout the United States. In 2018 pedestrian fatalities increased by more than 3 percent, totaling 6,283 deaths—the most deaths since 1990. Then in 2019, pedestrian fatalities decreased by 2.7 percent—169 fewer fatalities. Despite the encouraging trend, many agencies continue to work on improving safety for pedestrians and bicyclists. This case study document provides information on how agencies have worked with FHWA to improve pedestrian and bicyclist safety through the Federal Highway Administration (FHWA) Pedestrian and Bicyclist Safety Focused Approach Program. This document includes case studies for the City of Austin, Texas and the States of Arizona, California, Florida, Georgia, New Mexico, and New York.



<sup>&</sup>lt;sup>1</sup> NHTSA's National Center for Statistics and Analysis. Traffic Safety Facts, 2018 Fatal Motor Vehicle Crashes: Overview (DOT HS 812 826), October 2019. Available: <a href="https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812826">https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812826</a>

<sup>&</sup>lt;sup>2</sup> NHTSA's National Center for Statistics and Analysis. Traffic Safety Facts, 2019 Fatal Motor Vehicle Crashes: Overview (DOT HS 813 060), December 2020. Available: <a href="https://www.nhtsa.gov/press-releases/roadway-fatalities-2019-">https://www.nhtsa.gov/press-releases/roadway-fatalities-2019-</a>

 $<sup>\</sup>underline{fars\#:} \sim : text = Pedestrian\%20 fatalities\%20 (169\%20 fewer\%20 fatalities, fewer\%20 fatalities\%20 (202.9\%25\%20 decrease)$ 

# THIS PAGE IS INTENTIONALLY LEFT BLANK





Federal Highway Administration's (FHWA) Pedestrian and Bicyclist Safety Focused Approach Program

# Statewide Engagement to Support Pedestrian Safety in Arizona

To support implementation of its statewide Pedestrian Safety Action Plan (PSAP), Arizona DOT is using FHWA assistance, training, and other methods to engage with local communities to support pedestrian safety improvements.

#### **Background**

The Arizona Department of Transportation (ADOT) has long placed an emphasis on improving pedestrian and bicyclist safety. FHWA identified Arizona as a Focus State for pedestrian safety in 2006. Arizona participated in some of the first FHWA-provided trainings on pedestrian safety planning and design. After developing a Pedestrian Safety Action Plan (PSAP) in 2009, the State made the decision to revisit the plan and update it in 2017. The updated PSAP took a new approach to identifying sites for safety improvements by incorporating a systemic or risk-based analysis. The identification of high-risk locations, in addition to high-crash locations coupled with the use of proven safety countermeasures, provides ADOT with plan for solving existing safety problems and reducing future injuries and fatalities.

### An Updated, Proactive Approach to Safety

One of the core features of the updated PSAP is its emphasis on pedestrian risk, looking proactively at improving safety even where no crashes occurred previously. To accomplish this, ADOT and its contractors applied the Pedestrian and Bicycle Crash Analysis Tool (PBCAT) typology to crashes involving pedestrians during the period from 2011 to 2015 and



## Training Summary

Since 2006, Arizona received:

- 6 Designing for Pedestrian Safety courses
- 2 How to Develop a Pedestrian Safety Action Plan courses
- 2 Designing for Pedestrian Safety 201 courses
- 1 Designing for Bicyclist and Pedestrian Safety course
- 1 PSAP Workshop



U.S. Department of Transportation

Federal Highway Administration

categorized them into common crash type groups. Using these groups, ADOT was able to understand the types of roadway characteristics, temporal conditions (e.g. time of day), and other factors that were associated with pedestrian crashes. This resulted in a set of 18 high-risk segments, in addition to high-crash segments and intersections representing locations where crashes had most frequently occurred.

The data analysis set the stage for the countermeasure selection process, which tapped into engineering as well as behavioral countermeasure recommendations. ADOT identified a wide range of countermeasures in the PSAP, along with information about effectiveness and cost. Putting the pieces together, the plan closes with a set of recommendations for specific countermeasures along the identified high crash and high-risk segments.

These recommendations set the stage for further engagement with local and tribal communities, and ultimately countermeasure deployment.

#### **Collaboration with Local Communities**

The updated ADOT PSAP resulted in several key outcomes in 2017. One of these was a strategy to begin engaging with local agencies across the State on pedestrian safety priorities identified in the plan. The majority of high-crash and high-risk sites identified in the ADOT analysis were located in local communities, rather than on State-owned roadways. ADOT personnel worked collaboratively with local agencies to identify appropriate countermeasure solutions for these areas. "Like many States, most of our pedestrian crashes and pedestrian safety

improvement opportunities are found on roads controlled by local public agencies where ADOT does not have direct jurisdiction. Many of these local agencies look at ADOT for guidance and assistance with pedestrian safety issues," said Kerry Wilcoxon, the State Traffic Safety Engineer for ADOT.

ADOT tapped into FHWA technical assistance to support the training courses and workshops in local communities, including Flagstaff, Tucson, and Phoenix. Through these sessions, ADOT helped local agencies and its own staff connect observed problems at identified locations with proven countermeasures. ADOT received further support from the FHWA Safe Transportation for Every Pedestrian (STEP) program, which provided ADOT and local agencies additional technical assistance on pedestrian crossing improvements. FHWA and its consultants worked with ADOT to develop a countermeasure selection tool based on existing PEDSAFE and STEP guidance, which local agencies used to determine the most appropriate countermeasures for crossings identified as being high-risk for pedestrians (figure 1).



Safety » AZ STEP Guide Safe Transportation for Every Pedestrian

#### AZ STEP Guide Safe Transportation for Every Pedestrian

As part of the Every Day Counts (EDC-5) program on safe transportation for every pedestrian (STEP), the Federal Highway Administration (FHWA) published an updated "Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations" to help agencies choose countermeasures based on roadway characteristics and pedestrian safety issues. We're creating an Arizona-specific guide so that local engineers can find examples and drawings and specs for these countermeasures.

While AZ STEP program contains information about national, state and local best practices, site specific design solutions, national standards and state laws, the document remains a guide to practitioners. It is not intended to supersede local practices, standards or engineering judgment.

#### How to Use the AZ Step Guide

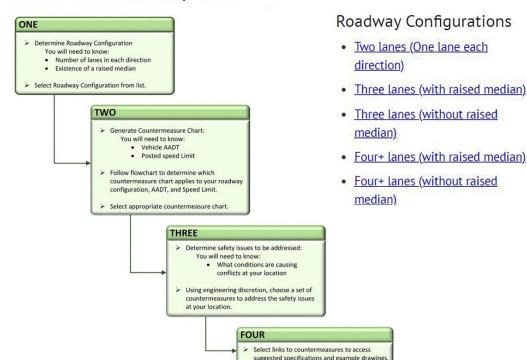


Figure 1. ADOT Countermeasure selection tool for uncontrolled crossings.<sup>3</sup>



<sup>&</sup>lt;sup>3</sup> Arizona Department of Transportation, *AZ STEP Guide Safe Transportations for Every Pedestrian*. https://azdot.gov/business/tsmo/operational-and-traffic-safety/az-step.

<sup>5</sup> FHWA Pedestrian and Bicycle Focus Approach

ADOT's engagement with local communities on the topic of pedestrian safety, and crossings in particular, resulted in an increase in successful applications for pedestrian safety projects in the Highway Safety Improvement Program (HSIP)—the Federal-aid program for highway safety—funding and prioritization process. Due to the severity of pedestrian crossing crashes, HSIP applications are largely successful in being funded because of the benefit/cost calculation for solving these problems with relatively inexpensive countermeasures like raised pedestrian refuge islands and Pedestrian Hybrid Beacons (PHBs). Local communities are submitting more projects for consideration for these pedestrian safety improvements, and ADOT is exploring methods to treat these sites more quickly than what is typical with its traditional HSIP process.

#### **Lessons Learned**

Since the development of the PSAP and subsequent statewide engagement on pedestrian safety issues, ADOT has continued to make progress in its efforts to improve pedestrian safety. Their engagement with local communities has resulted in more pedestrian safety projects in the pipeline. "Providing this expertise to our local safety partners has been a force multiplier for conveying the benefits of the larger pedestrian safety community down to the local level," said Wilcoxon.

Beyond the traditional training and workshop methods of engagement, ADOT is also working to develop videos to continue promoting the use of STEP countermeasures. These videos are intended to reach both a non-technical audience (such as local decision makers) and planning and engineering staff. ADOT is continuing to explore options for quick delivery of low-cost safety countermeasures to treat high-risk locations around the State.

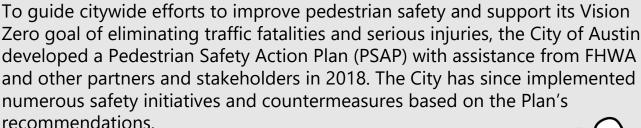
#### For more information, contact:

Kerry Wilcoxon, P.E., PTOE 602.712.2060 <u>kwilcoxon@azdot.gov</u>



Federal Highway Administration's (FHWA) Pedestrian and Bicyclist Safety Focused Approach Program

# **Austin Develops a Pedestrian Safety Action Plan**



#### **Background**

In 2011, the Federal Highway Administration (FHWA) identified the City of Austin as a Pedestrian Safety Focus City due to its high pedestrian fatality rate relative to the national average. In 2011, the Dangerous by Design report from Smart Growth America identified the Austin-Round Rock Metro area as the 18th most dangerous in the country for pedestrians. The City has taken numerous steps to improve pedestrian safety conditions, including the creation of a Pedestrian Program in 2016. As a Focus City, Austin has received technical support from FHWA in the form of webinars, workshops, and in-person courses on various safety topics. City staff attended and also hosted a Peer Exchange in 2019 that brought together numerous cities to discuss pedestrian and bicyclist safety issues. In 2013, FHWA led a three-day workshop in Austin on "How to Develop a Pedestrian Safety Action Plan." The workshop brought together representatives from various City departments, regional transportation partners, public health professionals, and pedestrian safety advocates to identify the City's top pedestrian safety concerns and make recommendations for improving pedestrian safety in Austin.



### Technical Assistance Summary

Since 2015, the City of Austin received:

- 3 Designing for Pedestrian Safety 201 courses
- 1 Designing for Bicyclist and Pedestrian Safety courses
- 1 Road Safety Audit
- 1 Law Enforcement course
- 2 Peer Exchange events



"Between 2010 and 2015 there were nearly 1,900 pedestrians involved in traffic crashes in Austin, resulting in 121 fatalities."

#### **PSAP Development**

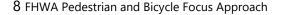
After the creation of the Pedestrian Program, City of Austin staff initiated development of the Austin PSAP, and the plan was officially completed in 2018. The plan—which includes 21 action items related to a variety of program areas—provided the City with a blueprint for reducing pedestrian fatalities and serious injuries. The plan includes a robust sociodemographic analysis to highlight the racial, class, and gender disparities that exist with respect to pedestrian safety outcomes in Austin. This analysis found, for example, that while Blacks make up only 7 to 8 percent of the Austin population, they account for nearly 17 percent of pedestrians involved in crashes overall, as well as 18 percent of pedestrian serious injuries and 24 percent of pedestrian fatalities. "The findings from the PSAP analysis have been crucial components of Austin's pedestrian planning framework and project prioritization efforts as we seek to address the historical inequities that have led to disparate safety outcomes across the City," said Joel Meyer, Transportation Planner with the Austin Transportation Department and Vision Zero Program.

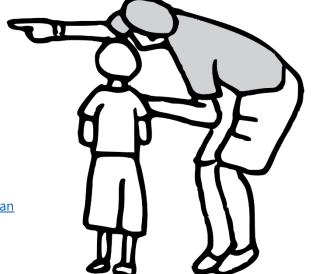
The Austin Strategic Mobility Plan (the city-wide transportation plan) in 2019 officially incorporated many of the recommendations included in the PSAP, making pedestrian safety a component of the City's broader transportation planning framework.

A key early win resulting from recommendations included in the plan was the creation of a Pedestrian Crossing Program within the Austin Transportation Department to implement low-cost, high-impact pedestrian safety treatments at high-crash and high-risk locations throughout the city. In November 2018, Austin voters approved a bond referendum which included \$4 million for the Pedestrian Crossing Program to rapidly expand the number of pedestrian crossings and other safety treatments.



<sup>&</sup>lt;sup>4</sup> City of Austin, *Pedestrian Safety Action Plan*. https://www.austintexas.gov/department/pedestrian-safety-action-plan





#### **PSAP Impacts**

Since the adoption of the PSAP, Austin implemented numerous pedestrian safety projects throughout the City. Some of these included:

- Installing over 50 pedestrian crossing islands.
- Activating Leading Pedestrian Intervals at 110 intersections throughout downtown.<sup>5</sup>
- Doubling the number of Pedestrian Hybrid Beacons (from around 40 to 80).
- Installing pedestrian countdown timers at approximately 600 intersections.
- Receiving City Council approval to reduce speed limits on nearly 900 miles of neighborhood streets, urban core arterials, and downtown streets.<sup>6</sup>
- Identifying targeted pedestrian safety countermeasures for 'High-Injury Roadways'.<sup>7</sup>

Since the PSAP includes 21 specific action items, the success of the initiative will hinge on the City's ability to implement these actions. The PSAP states that the Austin Transportation Department will conduct ongoing evaluations to assess the impact of the PSAP and track implementation.

Because it is meant to be a complementary document to the Austin Strategic Mobility Plan, the City will monitor implementation of the PSAP through the implementation of these two documents. Additionally, the Vision Zero website provides updates on new projects and initiatives relevant to pedestrian safety. Ultimately, a reduction in pedestrian fatalities and injuries will reflect the PSAP's success. The City of Austin maintains an extensive public crash data portal to track pedestrian fatalities and injuries (and other modes) as these initiatives are implemented (figure 2).

<sup>&</sup>lt;sup>5</sup> Vidal, Gariela. *Austin Implements 'leading pedestrian intervals' to improve downtown traffic safety.* <a href="https://cbsaustin.com/news/local/austin-implements-leading-pedestrian-intervals-to-improve-downtown-traffic-safety">https://cbsaustin.com/news/local/austin-implements-leading-pedestrian-intervals-to-improve-downtown-traffic-safety</a>.

<sup>&</sup>lt;sup>6</sup> City of Austin, *Speed limits change on neighborhood and urban core streets to improve safety for all travelers*. June 11, 2020.

<sup>&</sup>lt;sup>7</sup> City of Austin, *High-Injury Roadways to Receive Safety Improvement*. July 7, 2020.

<sup>9</sup> FHWA Pedestrian and Bicycle Focus Approach

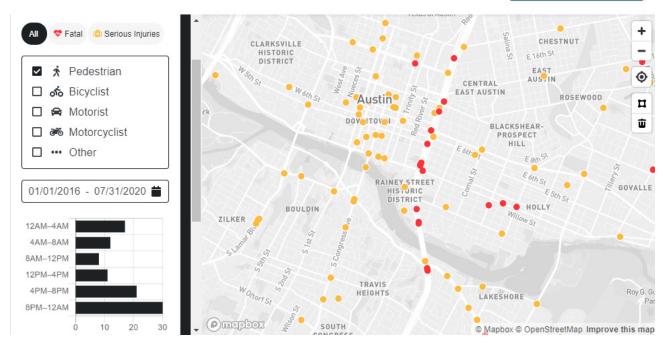
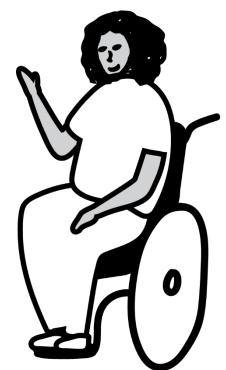


Figure 2. Austin maintains a public crash data portal called the Vision Zero Viewer with pedestrian data as part of its Vision Zero program.<sup>8</sup>

#### **Lessons Learned**

The City of Austin continues to implement elements of the PSAP. While the focus has primarily been on engineering countermeasures such as crossing improvements and signalization strategies, the next step will be to focus on some of the programmatic and policy recommendations, such as the development of a Pedestrian Master Plan starting that started in winter 2020 to serve as a unifying framework for improving pedestrian safety, access, and comfort in Austin. Coordination with partner agencies to identify solutions on highspeed roadways not controlled by the City continues to be a challenge, but recent commitments by the State of Texas to eliminate traffic fatalities has led to increased coordination between the City and State DOT, and reconstruction of Interstate 35 in Austin presents an opportunity to enhance pedestrian safety and access on



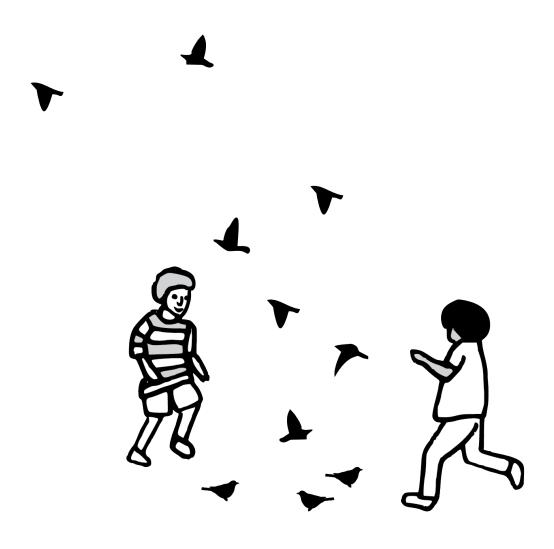
<sup>&</sup>lt;sup>8</sup> City of Austin, Vision Zero Map. <a href="https://visionzero.austin.gov/viewer/map">https://visionzero.austin.gov/viewer/map</a>.

<sup>10</sup> FHWA Pedestrian and Bicycle Focus Approach

one of the State's highest crash corridors. In addition, the City continues to seek innovative solutions that could complement the efforts outlined in the PSAP. One example of a more recent innovative approach is the Healthy Streets Program which was implemented to provide access to active transportation opportunities amid public health responses to COVID-19.

#### For more information, contact:

Joel Meyer Transportation Planner Joel.meyer@austintexas.gov



THIS PAGE IS INTENTIONALLY LEFT BLANK 12 FHWA Pedestrian and Bicycle Focus Approach



Federal Highway Administration's (FHWA) Pedestrian and Bicyclist Safety Focused Approach Program

# California's Bicycle Improvement Monitoring Program

As part of its Bicyclist Collision Monitoring Program, California Department of Transportation (Caltrans) has identified corridors for potential safety improvements for bicyclists throughout the State. FHWA assisted in the completion of Road Safety Audits (RSAs), and Caltrans is installing safety countermeasures on State-owned roadways.

#### **Background**

Like many other States, California has seen increasing rates of bicyclist fatalities and injuries since 2012, and the State has been an FHWA-desigated Focus State since 2006. In 2017, the number of bicyclist fatalities was the second highest of any State (4.1 percent versus the 2.2 percent national average) (figure 3). Caltrans is currently working to mitigate the high rate of bicyclist fatalities and serious injuries on its roadways statewide. The organization has adopted a "Toward Zero Deaths" framework, and the 2015-2020 Strategic Management Plan specifically calls for a reduction in bicyclist fatalities and injuries. As part of this strategy, Caltrans began a Pilot Bicycle Collision Monitoring Program.<sup>9</sup>

"Safety, and specifically reducing fatalities and injuries among users of its highway network, is Caltrans' No. 1 listed goal in its 2015-2020 Strategic Management Plan." 10

#### 13 FHWA Pedestrian and Bicycle Focus Approach

### **Training Summary**

Since 2006, California received:

- 5 Designing for Bicyclist and Pedestrian Safety courses
- 41 Designing for Pedestrian Safety courses
- 10 How to Develop a Pedestrian Safety Action Plan courses
- 8 Pedestrian Safety Action Plan Workshops
- 1 Designing for Pedestrian Safety 201 course
- 1 Designing for Bicyclist Safety course
- 2 Bicycle RSAs
- 69 total FHWA-led courses



U.S. Department of Transportation

Federal Highway Administration

<sup>&</sup>lt;sup>9</sup> Caltrans, *Mile Marker- Summer 2019*. https://dot.ca.gov/-/media/dot-media/programs/risk-strategic-management/documents/mile-marker/mm-2019-q2-bike-ped-a11y.pdf.

### Bicycle Injuries and Fatalities on State Highways 2013-2017

Year	Injuries	Fatalities
2013	1,110	30
2014	910	16
2015	914	23
2016	936	27
2017	794	20
Total	4,664	116



Source: Caltrans Traffic Accident Surveillance & Analysis System (TASAS)

Figure 3. Bicyclist injuries and fatalities on State highways in California, 2013-2017. 11

#### **Establishing a Pilot Program**

In April 2018, Caltrans released its Pilot 2018 Bicyclist Collision Monitoring Program to identify and investigate sites in need of safety improvements and systematically work to make needed changes at these sites. Using the Caltrans Traffic Accident Surveillance and Analysis System (TASAS), Caltrans staff collected data on all collisions involving bicyclists which resulted in fatalities or injuries over a 5-year period. The program then identified high collision concentration locations and corridors throughout the State and investigated the locations to identify potential safety countermeasures. In total, Caltrans staff completed 252 investigations in all 12 Caltrans districts.<sup>12</sup>

FHWA has been instrumental in the implementation of this program, providing technical assistance, training, and a working session. FHWA also assisted with two RSAs. The first RSA, in South Lake Tahoe, was initiated after data analysis revealed the need for safety improvements on U.S. 50. Caltrans, the Tahoe Regional Planning Agency, and the City of South Lake Tahoe requested the RSA. After the RSA was completed, FHWA released an extensive report with recommendations including high-visibility pedestrian crossings at all signalized intersections, maximum-width bicycle lanes, mid-block crossings, and improved pedestrian lighting. Based on the results of another RSA in Caltrans District 12, the State decided to install a Class II Bikeway

<sup>&</sup>lt;sup>11</sup> Ibid

<sup>&</sup>lt;sup>12</sup> Caltrans, 2018 Pilot Bicyclist Collision Monitoring Program. <a href="https://dot.ca.gov/-/media/dot-media/programs/safety-programs/documents/ped-bike/f0018147-2018-pilot-bicyclist-collision-monitoring-program-fact-sheet-version-1-a11y.pdf">https://dot.ca.gov/-/media/dot-media/programs/safety-programs/documents/ped-bike/f0018147-2018-pilot-bicyclist-collision-monitoring-program-fact-sheet-version-1-a11y.pdf</a>.

and add other bicycle facilities along a 16-mile section of State Route 1. FHWA also assisted with an RSA of State Route 49 in Nevada City with similar resulting recommendations.

#### **Outcomes**

As a result of the RSA in South Lake Tahoe, the State provided funding to include roadway lighting, colored bicycle-lane treatments, and mid-block crossings on U.S. 50. Nevada City has proposed four single-lane roundabouts, improved pedestrian crossings and lighting. These projects are awaiting funding but are expected to be completed by end of 2021.

"Through their technical resource center, FHWA became the partner I didn't have at Caltrans," said Rachel Carpenter, Chief Safety Officer for Caltrans. "Their staff are experts in safety, coming from both practitioner and academic backgrounds and having worked in various safety-related disciplines like engineering and enforcement."

As Caltrans identifies more priority locations and conducts investigations as a result of this program, the State will identify more opportunities to improve safety through countermeasure deployment. As an ongoing initiative, the success of the Bicyclist Collision Monitoring Program will be determined by the ability of Caltrans to work with local communities to implement safety countermeasures and, more long-term, to reach its "Toward Zero Deaths" goal of reducing bicyclist fatalities.<sup>13</sup>

#### **Next Steps**

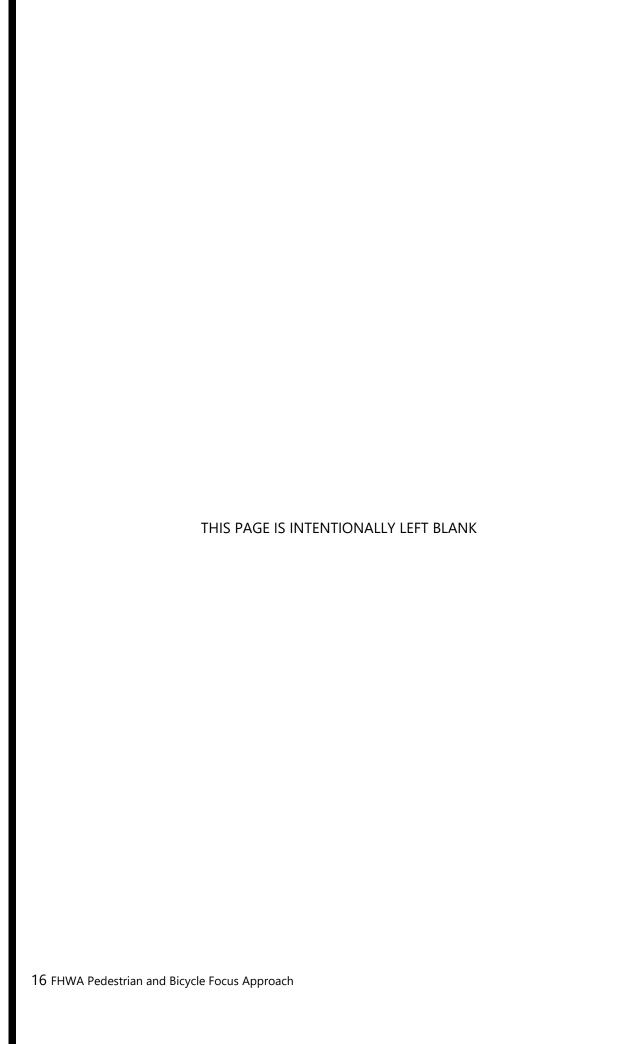
Caltrans continues to hone its Pilot Bicyclist Collision Monitoring Program, and it was made permanent within the new Division of Safety Programs led by Rachel Carpenter, the Chief Safety Officer at Caltrans. This program is unique in that it supplements traditional safety measures and network screening methods with field reviews using RSAs to add needed context to aid in the selection of safety countermeasures. Moving forward, the program will follow a similar path as the Caltrans Pedestrian-Focus Countermeasure Program in that it will utilize both a crash-based and a risk-based scheme to identify corridors and locations to investigate safety improvements. The pedestrian-oriented program identified 150 high-crash and 500 systemic (risk-based) locations statewide for investigation. Throughout both processes, Caltrans is continuing to work with municipalities and local planning organizations to identify

#### For more information, contact:

Rachel Carpenter, P.E. Chief Safety Officer <u>rachel.carpenter@dot.ca.gov</u>

and implement bicyclist and pedestrian safety measures wherever possible.

<sup>13</sup> Ibid.







Federal Highway Administration's (FHWA) Pedestrian and Bicyclist Safety Focused Approach Program

## Statewide Engagement to Support Pedestrian Safety in Florida

As a Focus State, the Florida Department of Transportation (FDOT) used the Federal Highway Administration's (FHWA) Pedestrian and Bicyclist Safety Focused Approach Program trainings to build a culture of safety. The trainings laid the groundwork for updating internal statewide guidance and policies to consider multimodal safety concerns and developing an external initiative with the focus of promoting bicycle and pedestrian safety.

#### **Background**

Florida has long been known as a place that has been designed for vehicles, rather than pedestrians and bicyclists. In 2011, Smart Growth America's inaugural *Dangerous by Design* report ranked the top 10 most dangerous large metro areas for pedestrians, and Florida cities appeared as the first four locations on the list. <sup>14</sup> FDOT and local agencies have been working hard to change that. This case study documents a variety of mechanisms that FDOT and partners have employed to address this safety need. After the inaugural *Dangerous by Design* report, the State partnered with the National Highway Traffic Safety Administration (NHTSA) to conduct a statewide pedestrian and bicycle safety assessment, which provided key recommendations that resulted in Florida's first pedestrian and bicycle strategic safety plan.

#### **Approach to Safety Culture**

One of FDOT's first initiatives from the statewide pedestrian and bicycle safety assessment was to shift the culture within the

#### 17 FHWA Pedestrian and Bicycle Focus Approach



## Training Summary

Since 2015, through FHWA's
Pedestrian and Bicyclist Safety
Focused Approach Program FDOT
received 25 trainings through 4
different courses:

- 20 Designing for Pedestrian Safety courses
- 3 Designing for Bicyclist Safety courses
- 1 Designing for Pedestrian
   Safety 201 training
- 1 PSAP Workshop



U.S. Department of Transportation

Federal Highway Administration

<sup>&</sup>lt;sup>14</sup> Smart Growth for America, *Dangerous By Design 2011*. <u>https://smartgrowthamerica.org/resources/dangerous-by-design-2011/</u>

agency and the public perspective to think of multimodal transportation as essential.

To support this culture shift, FDOT initially requested four training courses through FHWA's Pedestrian and Bicyclist Safety Focused Approach Program. These courses included Designing for Pedestrian Safety, Pedestrian and Bicyclist Safety Action Plan Workshop, Road Safety Audits, and On-Demand Technical Assistance for the State's Law Enforcement Agencies. The first round of trainings successfully jump-started the cultural transition and led FDOT to request 25 additional FHWA-led trainings. The FHWA trainings encouraged FDOT staff and the State Secretary of Transportation to change the way the State designs the roadways. Leadership at this level, along with that of the Division Secretaries responsible for managing the



seven Districts, was essential in changing how engineers viewed roadway design.

District 5—which includes Orlando-Kissimmee, ranked as the most dangerous large metro area in the 2011 *Dangerous by Design* report—took steps to further support the internal FDOT cultural shift and external promotion of bicycle and pedestrian safety. Working with the State Bicycle/Pedestrian Safety Program Manager in the FDOT Traffic Safety Office, they identified champions to help shift the safety culture within the State transportation agencies. The approach was two-fold: first, engage with engineers to identify new approaches to traffic engineering with a multimodal focus; and second, encourage the vehicle-centric public to begin viewing multimodal transportation as essential. To implement this approach, District 5 FDOT staff engaged the counties making up the *Dangerous by Design* areas—Orange, Seminole, Osceola Counties. FDOT District Secretaries appointed District Champions to assist with communicating the message about bicycle and pedestrian safety with local and regional partners, as well as staff within FDOT Districts.

In 2013, FDOT formed the Pedestrian and Bicycle Safety Coalition to externally promote bicycle and pedestrian safety with the primary task of implementing the strategies outlined in the *Florida Pedestrian and Bicycle Strategic Safety Plan*. <sup>15</sup> The coalition was comprised of a diverse group of representatives from local, State, and Federal transportation agencies; local and State bicycle and pedestrian groups; businesses; and other organizations representing the 4Es (Engineering, Education, EMS, and Enforcement). The group branded Florida's *Alert Today Alive Tomorrow*, Florida's premiere pedestrian and bicycle safety campaign. <sup>16</sup>

<sup>&</sup>lt;sup>15</sup> Alert Today, Alive Tomorrow. <a href="https://alerttodayflorida.com/About%20US/FDOT\_PBSSP%20Update%20Final\_with%20data%20corrections.pdf">https://alerttodayflorida.com/About%20US/FDOT\_PBSSP%20Update%20Final\_with%20data%20corrections.pdf</a>.

<sup>&</sup>lt;sup>16</sup> Alert Today, Alive Tomorrow. <a href="https://www.alerttodayflorida.com/">https://www.alerttodayflorida.com/</a>

#### **Outcomes**

Approximately 90 percent of fatal and serious injury crashes occur in 25 of the 67 counties in Florida. Between 2015 and 2019, pedestrian and bicycle fatalities and serious injuries and fatalities in those counties decreased from 3,052 to 2,876 (figure 4).

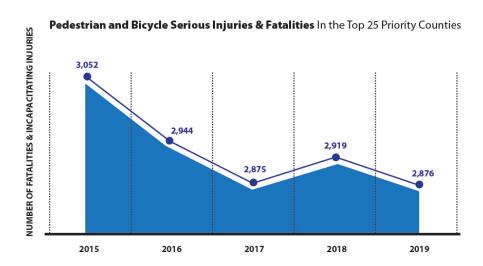


Figure 4. Pedestrian and bicycle serious injuries and fatalities in Florida's top 25 priority counties. 2015-2019.<sup>17</sup>

Following the FHWA-led trainings, five FDOT Districts are taking action to improve safety. The education efforts laid the groundwork for the City of Orlando to implement their Vision Zero Action Plan. The City and District staff are collaborating on projects located on the High Injury Network—including rapid implementation coordinating safety improvements with planned resurfacing projects.

As a result of the Law Enforcement Agency trainings, law enforcement agencies are showing more investment and buy-in to statewide and local efforts through coordinated projects with FDOT. The FDOT Traffic Safety Office is developing GIS maps for law enforcement agencies that locate five-years of pedestrian and bicyclist fatalities and serious injury crashes and guide strategic program investments such as education and enforcement. The mapping will be used to identify crash clusters and areas with the highest representation of crashes. This information is essential for FDOT when communicating with local law enforcement leadership and provides a visualization tool to illustrate the need to improve safety. In turn, local law enforcement can provide outreach and assistance in addressing safety issues within those specific communities.

The Pedestrian and Bicycle Safety Coalition quickly achieved their first task of the *Florida Pedestrian and Bicycle Strategic Safety Plan* by implementing the five-year plan within three

<sup>&</sup>lt;sup>17</sup> Alert Today, Alive Tomorrow. https://www.alerttodayflorida.com/.

<sup>&</sup>lt;sup>18</sup> City of Orland, Vision Zero. <a href="https://www.orlando.gov/Initiatives/Vision-Zero">https://www.orlando.gov/Initiatives/Vision-Zero</a>.

<sup>19</sup> FHWA Pedestrian and Bicycle Focus Approach

years. "All are on the coalition voluntarily—they are all part of the solution. The most important element is telling people they can—and providing them the tools to make positive changes," Trenda McPherson, State Bicycle/Pedestrian Safety Program Manager for FDOT Traffic Safety Office, explained of their successes. Following that accomplishment, the group developed a second five-year plan in 2017 and is once again slated to complete that plan in 2021. Marketing and education campaigns have also proven successful. Public opinion surveys, observational studies, and phone surveys show increased awareness of the need to drive safer and obey traffic laws. It is apparent that the materials are resonating with the public and people want to be part of the solutions for improving safety for bicyclists and pedestrians.

Early FDOT guidance and design manuals encouraged localities to integrate new multimodal transportation considerations into roadway designs but the local agencies felt slightly inhibited in their efforts without accountability at other levels in the State. FDOT took strides to further institutionalize the safety culture by creating a Complete Streets policy and implementing a context-based approach to street design. District 4 developed guidelines for road diets, which FDOT adopted statewide and now maintains a database of completed projects. Additionally, FDOT researched lighting solutions and directed \$100M to the Districts to replace high sodium lighting with LEDs for improved pedestrian visibility resulting in enhancements at approximately 80 percent of the State's most dangerous intersections.

#### **Lessons Learned and Next Steps**

FDOT's updates to the design manuals made the most significant impact on safety culture across the State. And, with Florida being such a large State, the League of Cities and word of mouth between Districts and local governments creates interest from the ground up. Both can be tied directly back to the FHWA trainings.

The momentum is not stopping. While pedestrian and bicycle fatalities and serious injuries in Florida have slowed, it is now time to explore how to make significant impacts to further decrease non-motorized fatalities and serious injuries. One next step is to communicate the culture of safety and design manuals to the consultants working with FDOT. Hattaway also suggested creating meaningful performance measures for transportation leadership would create buy-in across all political structures. He noted Transportation Safety Awards (either project or program specific), creating and implementing data-driven Vision Zero Action Plans, and tracking and reducing fatalities and serious injuries on the High Injury Network are all quantifiable outcomes.

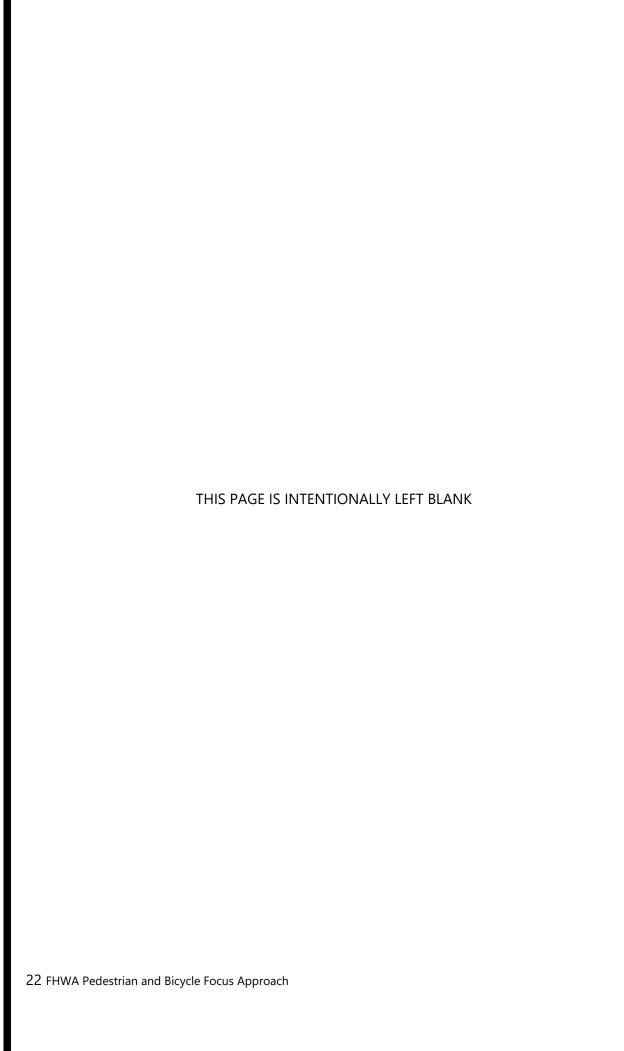


As for the public engagement initiative, an important lesson learned is to speak the right language and say the right thing for target audiences to receive the messaging. Floridians represent many different cultures and FDOT put much thought into public perception and appropriate messaging. Next, Ms. McPherson is working on linking FHWA's priorities in Florida—intersection, roadway departure, and bicycle and pedestrian crashes—to tell a complete story about safety.

#### For more information, contact:

Trenda McPherson 850.414.4025 <u>Trenda.McPherson@dot.state.fl.us</u>





Federal Highway Administration's (FHWA) Pedestrian and Bicyclist Safety Focused Approach Program

# Pedestrian Safety Training and Technical Assistance in Georgia

As part of its effort to improve pedestrian safety statewide, the Georgia Department of Transportation (GDOT) developed a Pedestrian Safety Action Plan (PSAP). To implement one of the plan's recommendations, GDOT partnered with FHWA and PEDS (a Statewide advocacy organization) to engage regions across the state with training and technical assistance on pedestrian safety topics.

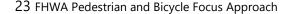
#### **Background**

Over the past decade, Georgia experienced high rates of pedestrian fatalities and injuries. The 2016 *Dangerous by Design* report from Smart Growth America indicated that Georgia had the tenth highest Pedestrian Danger Index in 2016 of all U.S. States. <sup>19</sup> The Safety Performance Management Measures rule developed by FHWA and the National Highway Traffic Safety Administration (NHTSA) in 2017 requires States to set safety targets for non-motorized users. GDOT, the Georgia Office for Highway Safety, and other State organizations partnered with FHWA to set forth objectives related to these safety targets.

Georgia established a 'Toward Zero Death' goal of reducing pedestrian fatalities long-term, along with a short-term goal of reducing pedestrian fatalities by 15 deaths a year through 2022 (figure 5).<sup>20</sup>

https://smartgrowthamerica.org/resources/dangerous-by-design-2016/. <sup>20</sup> Georgia Department

of Transportation, *Pedestrian Safety Action Plan 2018-2022*. http://www.dot.ga.gov/DriveSmart/Travel/BikePed/BikePedSAP.pdf





## Training **Summary**

Since 2015, Georgia received:

- 5 Designing for Pedestrian
   Safety 201 courses
- 1 Designing for Bicyclist and Pedestrian Safety 201 course
- 2 Designing for Pedestrian Safety courses
- 2 Designing for Bicyclist Safety courses



U.S. Department of Transportation

Federal Highway Administration

<sup>&</sup>lt;sup>19</sup> Smart Growth America, *Dangerous by Design 2016*.

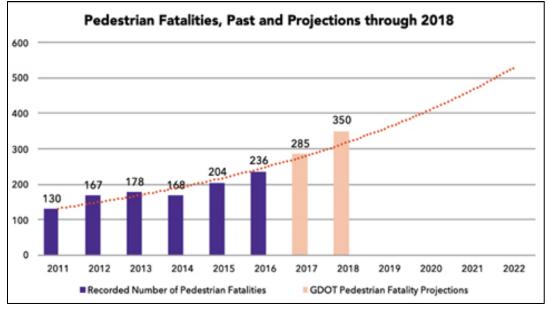




Figure 5. Pedestrian fatalities projections from the Georgia PSAP.<sup>21</sup>

#### **PSAP Development**

With the assistance of FHWA, GDOT, the Georgia Office for Highway Safety, and PEDS (a Statewide advocacy organization) developed and adopted a PSAP in 2018. The PSAP lays out action items in five key areas—Data; Transportation Planning and Policy; Transportation Infrastructure Projects; Education, Enforcement, and Outreach; and Funding—that can be implemented both statewide and in particular divisions in order to reach its safety goals. Additionally, GDOT has rewritten their *Pedestrian and Streetscape Guide*. Released in 2019, this Guide provides a manual for engineers, planners, and advocates working to advance safe multimodal travel. The Guide includes all the FHWA STEP countermeasures and information from FHWA's *Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations*.<sup>22</sup>

One key recommendation in the plan is to deliver training and technical assistance on pedestrian safety topics to a wide variety of stakeholders and professionals around the State. Since the plan's completion, PEDS and GDOT worked with FHWA to schedule and deliver Designing for Pedestrian Safety courses in the various GDOT Districts. Four of the Districts have received these courses, which provide fundamental training on pedestrian safety planning and design concepts. "The credibility of the instructors, together with the quality of the content they provided, made the workshops far more impactful than anything PEDS could have provided on

<sup>&</sup>lt;sup>21</sup> Georgia Department of Transportation, *Pedestrian Safety Action Plan 2018-2022*. http://www.dot.ga.gov/DriveSmart/Travel/BikePed/BikePedSAP.pdf.

<sup>&</sup>lt;sup>22</sup> Blackburn, L., Zegeer, Z., and Brookshire, K. (2018). *Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations*. Federal Highway Administration.

https://safety.fhwa.dot.gov/ped\_bike/step/docs/STEP Guide for Improving Ped Safety at Unsig Loc 3-2018 07 17-508compliant.pdf.

its own," said Sally Flocks, the Founder and then-CEO of PEDS. Each training reached roughly 30 planners and engineers within those districts, representing both GDOT and local public agency staff.

#### **PSAP Deployment**

The completion of the PSAP and subsequent training and assistance led to the successful implementation of various crossing countermeasures. One example is Macon-Bibb County. The PSAP identified the county as one of its focus regions, and GDOT worked with the county to identify locations in need of countermeasures. GDOT selected five locations: Eisenhower Parkway, Emery Highway, Gray Highway, Pio Nono Avenue, and Mercer University Drive. Pedestrian Hybrid Beacons and other enhancements have been installed at some of these locations (figure 6).<sup>23</sup>





Figure 6. Construction of new Pedestrian Hybrid Beacon in Macon-Bibb County.<sup>24</sup>

The success of the PSAP will be determined by the ability of GDOT and other agencies to implement the action items related to Data, Transportation Planning and Policy, Transportation Infrastructure Projects, Education/Enforcement/Outreach, and Funding. Each action item has a responsible party, timeframe, and local action associated with it. In addition, the PSAP included a

<sup>&</sup>lt;sup>23</sup> Leedy, Aaron. *Following Years of Pedestrian Deaths in Macon, State and Local Leaders Working on Changes*. WGXA. <a href="https://wgxa.tv/news/local/following-years-of-pedestrian-deaths-in-macon-state-and-local-leaders-working-on-changes">https://wgxa.tv/news/local/following-years-of-pedestrian-deaths-in-macon-state-and-local-leaders-working-on-changes</a>.

<sup>&</sup>lt;sup>24</sup> Macon News, *Drivers need to be aware of new crosswalk safety measures*. <a href="https://macon-newsroom.com/5274/news/drivers-need-to-be-aware-of-new-crosswalk-safety-measures/">https://macon-newsroom.com/5274/news/drivers-need-to-be-aware-of-new-crosswalk-safety-measures/</a>.

Performance Report Card which will be used to track completed action items and the number of annual pedestrian fatalities (figure 7).<sup>25</sup>

The training courses and workshops have educated State and local professionals, and the sessions have been well-received across the State. While countermeasure deployment has proceeded at different speeds, the workshops have also resulted in a broad network of professionals around the State who are working on pedestrian safety issues.

#### **Performance Report Card**

The Performance Report Card will track annual progress towards the goals of the PSAP. It will track outputs, such as completed action items. It will also track outcomes, including the number of pedestrian fatalities. The Performance Report Card will be published annually and shared statewide. Data will be collected for crash related outcomes, non-crash related outcomes, and outputs for each action item listed in the PSAP.

<b>Crash Related Outcomes</b>	2015	2016	2017	2018	2019	2020	2021	2022	Data Source
Annual Pedestrian Crashes	4085	4174	4229						GEARS
Annual Pedestrian Injuries	3238	3316	3387						GEARS
Annual Pedestrian Fatalities	206	236	258						FARS/GEARS
% fatalities in relation to overall traffic deaths	14%	15%	16.8%						FARS

Figure 7. Excerpt from the PSAP performance report card.<sup>22</sup>

PEDS enhanced the impact of the value of the trainings by incorporating half-day sessions on issues of local and State relevance, including presentations about the PSAP and Temporary Pedestrian Access Routes (TPAR). "Transportation professionals who attended the 2018 training in Atlanta found the TPAR demonstration project especially valuable," Flocks said. PEDS staff noted that the workshops resulted in attendance at the Statewide Georgia Walks Summit and other events centered on pedestrian and bicyclist safety, indicating increasing interest in these topics after workshops were held. The statewide training and engagement will continue to connect partners with technical information and guidance to support pedestrian safety projects.

#### **Next Steps**

The PSAP set pedestrian safety goals for the State of Georgia through 2022. Upon the completion of that timeframe, GDOT and the Georgia Office of Highway Safety will need to reevaluate the initiatives implemented through the PSAP and set forth new action items for the future. The 2022 pedestrian fatality target of 183 set forth in the PSAP, if achieved, is still far off from the long-term goal of zero fatalities in the 'Toward Zero Deaths' framework. In the years since the Plan was completed, 265 and 247 pedestrians were killed in the State in 2018 and 2019, respectively. GDOT and the Georgia Office of Highway Safety will need to continue working with communities such as Macon-Bibb county to implement the features of its plans.

#### For more information, contact:

Larissa Bradburn	404.685.8722	larissa@peds.org
lan Sansom	404.685.8722	ian@peds.org

<sup>&</sup>lt;sup>25</sup> Georgia Department of Transportation, *Pedestrian Safety Action Plan 2018-2022*. http://www.dot.ga.gov/DriveSmart/Travel/BikePed/BikePedSAP.pdf





Federal Highway Administration's (FHWA) Pedestrian and Bicyclist Safety Focused Approach Program

# Statewide Engagement to Support Pedestrian Safety in New Mexico

Albuquerque, New Mexico's involvement as a Focus City for the Federal Highway Administration's (FHWA) Pedestrian and Bicyclist Safety Focused Approach Program led to incorporating New Mexico as a Focus State. New Mexico Department of Transportation (NMDOT) was identified as a Focus State and used the Pedestrian and Bicycle Safety trainings and technical assistance to increase awareness of pedestrian safety at the executive and statewide levels.

#### **Background**

Early in FHWA's Pedestrian and Bicyclist Safety Focused Approach Program, New Mexico was identified as a Focus State. New Mexico had also been involved in similar FHWA efforts (e.g., Every Day Counts Safe Transportation for Every Pedestrian), which helped increase awareness of pedestrians.

Between 2014 and 2018, the number of pedestrian crashes increased 12 percent and pedestrian fatalities increased by 53 percent in New Mexico. As a Pedestrian Safety Focus State, NMDOT was also looking for other ways to improve pedestrian safety. They did this through the Highway Safety Improvement Program (HSIP)—the Federal-aid program for highway safety— and FHWA's Every Day Counts initiative.

#### **PSAP Trainings**

With over 2,500 staff at NMDOT and a State that is diverse in cultures, geography, and crash types, NMDOT sought to reach as many people as possible through a variety of methods to increase awareness of pedestrian safety. The first resource they used from the Focus Approach was to engage in trainings on local leadership and transportation agencies with the intent to



## **Training Summary**

Since 2015, NMDOT received 8 FHWA-led trainings:

- 4 Designing for Pedestrian Safety courses
- 2 Road Safety Audit courses
- 2 PSAP Workshops



U.S. Department of Transportation

Federal Highway Administration

impact project development processes and encourage broader buy-in from stakeholders. In 2018 and 2019, the State hosted FHWA's Designing for Pedestrian Safety in Las Cruces and Albuquerque. In 2019, NMDOT also hosted the PSAP Workshop course in Santa Fe and Las Cruces and invited representatives from NMDOT, Metropolitan Planning Organizations (MPOs), Regional Transportation Planning Organizations (RTPOs), tribes, counties and cities.

Later in 2019, NMDOT turned its focus on internal education and began developing a statewide PSAP which includes a focus on educating staff on pedestrian safety issues. One goal of the PSAP is to evaluate internal processes and procedures that require updates and to update standard operating procedures for a more uniform approach to design and safety. At the local level, in 2017, the State developed an HSIP on-call contract to develop regional or local transportation safety plans.

#### **PSAP Outcomes and Funding**

NMDOT is on track to complete the statewide PSAP in 2021. To assist with implementation, the DOT will fund staff and consultants to conduct trainings on various aspects of the PSAP, including STEP countermeasures, broader findings, and action items. NMDOT's goal with the trainings is to foster constructive conversations regarding

pedestrian safety between planners and engineers throughout the

roadway lifecycle.

With the limited State and Federal funding, some local agencies have used Transportation Alternatives Program (TAP) funds for pedestrian improvements. NMDOT may partner with the Local Technical Assistance Program (LTAP) to engage with local agencies and build their capacity to apply and manage Federal funds as well as meet Americans with Disabilities Act (ADA) requirements.

NMDOT is educating designers that bicycle and pedestrian safety means more than meeting the ADA standards. NMDOT went through a substantial update to the ADA Transition Plan, and Design Manual which helped to unify NMDOT staff behind that message. Changes to the project development process included revamping standard drawings and integrating internal oversight into ADA plan review to make sure it meets ADA standards and considers broader safety needs. This process, to an extent, mimics the process for pedestrian and bicyclist safety action plans.

**Lessons Learned & Looking Ahead** 

Shannon Glendenning, Active Transportation Programs Supervisor (NMDOT), said "NMDOT is making great strides and has committed to improving the safety of pedestrians in New Mexico." NMDOT plans to develop detail tracking mechanisms in the implementation section of the PSAP. Peer exchanges and trainings have helped NMDOT to better understand its own and local agency needs and concerns. On the engineering side, NMDOT would like to engage more operations and design staff to talk through utilizing engineering judgement on projects that pose design challenges. On the behavioral side, NMDOT is engaging with NHTSA staff to provide education and engage law enforcement.

NMDOT would also like to better understand their agency's safety culture and what they can do to improve. This work will build off of a survey that was sent to design and project development staff about currently available resources, information, trainings, and processes that are in place, or those that may not yet be available but are of interest to staff. The questionnaire also asked respondents to consider how pedestrian fatalities impact communities throughout the State. The safety culture enhancement will build upon the PSAP, ADA plan development and implementation, trainings, and other safety programs, to help NMDOT address pedestrian and bicyclist safety throughout the State.

#### For more information, contact:

Shannon Glendenning 505.231.4300 Shannon.Glendenning@state.nm.us









Federal Highway Administration's (FHWA) Pedestrian and Bicyclist Safety Focused Approach Program



## Statewide Engagement to Support Pedestrian Safety in New York

New York State Department of Transportation (NYSDOT) developed a Pedestrian Safety Action Plan (PSAP) using the technical assistance made available through Federal Highway Administration's (FHWA) Pedestrian and Bicyclist Safety Focused Approach Program. The PSAP directly resulted in systemic countermeasure installation and contributed to agency coordination efforts to enhance pedestrian safety in New York State.

#### **PSAP Background**

In 2015, NYSDOT conducted a detailed analysis of crash data to identify the top priority crash types. The State created a three-pronged approach to decreasing fatalities and serious injuries in the top three crash types—pedestrians, roadway departure, and intersections. While the DOT had previously made strides emphasizing the need for pedestrian safety and multimodal transportation, the data indicated that a more significant focus on pedestrians from a traffic and safety perspective was needed.

With this knowledge, and as a Focus State in the FHWA Pedestrian and Bicyclist Safety Focused Approach Program, NYSDOT reached out to FHWA for assistance. FHWA provided technical assistance in the form of a statewide systemic analysis of pedestrian crashes. This analysis would go on to serve as the backbone of the New York State PSAP, which FHWA led the development efforts on behalf of the State.

## **Training Summary**

Since 2006, NYSDOT received 43 trainings through 7 different courses. In 2019, NYSDOT requested two trainings on Designing for Pedestrian Safety in New York City.

- 34 2-day Design courses
- 2 2-day Planning courses
- 2 Designing for Pedestrian Safety courses
- 1 1-day Design course
- 1 1-day Planning course
- 1 Law Enforcement course
- 1 PSAP Workshop



In 2016, NYSDOT developed the New York State PSAP with FHWA-provided technical assistance. <sup>26</sup>The plan's scope addresses four areas: Complete Streets and the American with Disabilities Act (ADA), the statewide pedestrian program, focus communities, and coordination.

#### **Countermeasure Implementation**

Since 2016, NYSDOT and partners have worked hard to implement the recommendations in the five-year PSAP—with an initial focus on low-cost countermeasures. NYSDOT identified uncontrolled crosswalks and intersections as the key to implementation as the improvements were inexpensive and easy to install. The State then shifted efforts to signalized intersections and anticipates completion in 2021.

Both State and local components funded PSAP implementation efforts. NYSDOT established \$40M in Highway Safety Improvement Program (HSIP)—the Federal-aid program for highway safety—set aside funding and released a local call for projects in 2017 for local governments to implement the same countermeasures as the State on their system. Recommended treatments were systemic and simple, including pavement markings, signs, signal timing changes, backplates with retro reflective borders, pedestrian countdown signals, and more. With the completed data analysis and network screening identifying locations for improvement, applicants only needed to identify qualifying locations for eligibility. The ease of the application and straightforward engineering made for a very successful program with local governments.

#### **Agency Coordination**

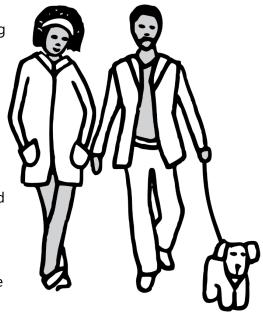
The PSAP prioritized agency coordination between State and local agencies, which contributed to a statewide review of policies impacting bicycle and pedestrian transportation. NYSDOT recognized silos between departments—such as operations, design, and others—resulting in differing design guidance, which they were able to reconcile through the PSAP process. Together, the traffic and safety departments explored ways to cohesively emphasize bicycle and pedestrian transportation as a safety issue, which results in more buy-in to invest in improvements.

Coordination between NYSDOT departments also includes developing strategies to work with designers to address safety issues earlier in project development. By including pedestrian, bicyclist, and safety issues early in the design process through mechanisms such as filling out a Complete Streets checklist, NYSDOT can increase awareness of the issues and provide education and training for staff. Part of this process is understanding what guidance designers and engineers need—an element the PSAP addressed when noting additional pedestrian crossing

<sup>&</sup>lt;sup>26</sup> NYSDOT, Pedestrian Safety Action Plan. <u>https://www.ny.gov/pedestrian-safety-action-plan/pedestrian-safety-action-plan.</u>

design opportunities to address in the NYSDOT Highway Design Manual.

Agency coordination within the PSAP focused on a 3E approach—engineering, education, and enforcement. NYSDOT led all engineering in-house and the Department of Health led the education efforts such as developing a public safety announcement for television and radio and marketing materials for transit stops in 20 communities with the highest frequency of pedestrian crashes. NYSDOT was also able to provide HSIP funds to the Department of Health to air public service announcements related to pedestrian safety. Law enforcement assisted with the third prong, conducting a two-week enforcement blitz every June focusing on pedestrian safety and issued warnings or citations to both pedestrians and drivers. The Governor's Traffic Safety Committee (GTSC) in cooperation with NHTSA, and the Departments of Health and Transportation developed a one-day training to educate officers on the pedestrian-related laws to enhance enforcement efforts.



#### **Outcomes**

In 2018, the Governor's Highway Safety Association recognized the PSAP with the Peter K. O'Rourke Special Achievement Award, which recognizes notable achievements in the field of highway safety. Notably, preliminary data showed a 22-percent decrease in pedestrian fatalities the first year of the plan. As a result of the PSAP recommendations, NYSDOT is currently revising two Highway Design Manual chapters on bicycles and pedestrians to better plan and design for multimodal safety. Pedestrians were also added to the annual regional work programs—which requires regions to investigate 20 percent of high-crash locations every year. After five years, the agency will have investigated all locations.

NYSDOT is also improving tracking mechanisms, specifically counting number of miles of bike lanes, improvements at uncontrolled crosswalks (e.g., number of completed projects, types of countermeasures installed), number of Complete Streets projects installed, and others. More detailed and timely record keeping reflects the State's importance of implementing these measures and investing in pedestrian safety. The Governor's Traffic Safety Committee reported citations issued (2,600), warning cards issued (4,463), and enforcement hours (3,877.5) from participating law enforcement agencies following four, two-week mobilization periods between 2016 and 2019.

#### **Lessons Learned and Next Steps**

The PSAP has helped New York State to broadly address pedestrian safety. However, during implementation NYSDOT found that not all communities were enthusiastic about the PSAP countermeasures. Several communities found the uncontrolled intersection treatments to be

unappealing aesthetically. This highlights the need for education and community engagement to successfully implement improvements.

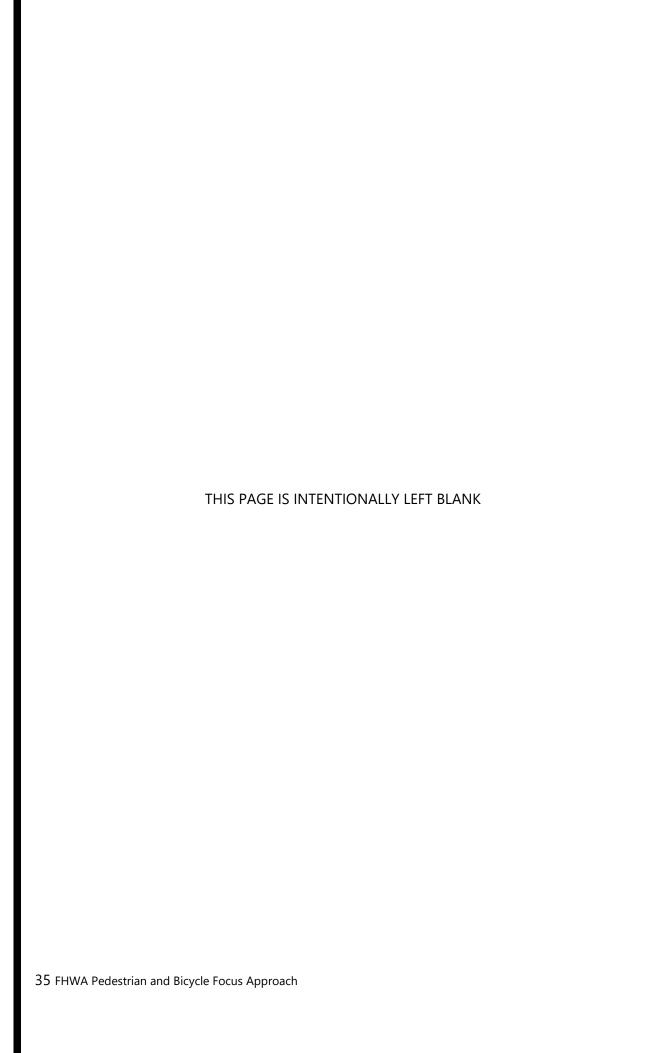
The enhanced focus and attention on multimodal safety has led to more funding support than ever before. NYSDOT anticipates advancing additional Complete Streets and ADA improvement projects in the coming years. Once the PSAP implementation is complete, the State will review the crash data to evaluate the plan's success and determine where to focus next.

Regina Doyle, Office of Safety Program Management and Coordination Bureau (NYSDOT), shared the biggest takeaway from the PSAP process is acknowledging areas for improvement and then seeking solutions. "If you need help, ask for it," she said, explaining that NYSDOT found "there are a lot of good resources available through the FHWA program." After success with the PSAP technical assistance, NYSDOT continues to explore what additional assistance is available.

#### For more information, contact:

Regina Doyle 518.485.0164 Regina.Doyle@dot.ny.gov











U.S. Department of Transportation

Federal Highway Administration

FHWA-SA-21-021

