

# HSIP Calms Intersections

## Funding for Safer Intersections

Intersections, driveways, and access points are crucial connections to roadways. However, they also create conflict points where the potential for a crash between users increases. In 2020, more than a quarter (8,750) of all fatal crashes in the United States occurred at intersections.<sup>1</sup>

The HSIP can help support a Safe System and keep all road users safe by funding intersection improvements that minimize and modify conflict points, reduce vehicle speeds, improve visibility, or provide space and protection for vulnerable road users such as pedestrians and bicyclists.<sup>2</sup>

### In 2021

States obligated 29 percent of HSIP funds to intersection safety projects.

## HSIP in 2021

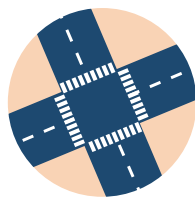


The HSIP funded

**1,710** INTERSECTION PROJECTS

with a total cost of

**\$945 million.**



HSIP-funded projects improved

**4,515** INTERSECTIONS

across the United States.



HSIP funded

**16** PROJECTS DEDICATED TO REDUCED LEFT-TURN CONFLICT INTERSECTIONS

including median U-Turns (MUTs) and restricted crossing U-Turns (RCUTs).



**All 50 States**

plus the District of Columbia and Puerto Rico used HSIP funds for

**INTERSECTION IMPROVEMENTS.**

## Top 5 INTERSECTION TRAFFIC CONTROL PROJECT TYPES

- 1 Modernize or Replace Traffic Signal**  
167 projects, \$81 million total
- 2 Roundabout**  
159 projects, \$160 million total
- 3 Signal-Controlled Systemic Improvements**  
63 Projects, \$52 million total
- 4 Sign or Mounted Intersection Flashers**  
40 projects, \$4 million total
- 5 New Signal**  
31 projects, \$14 million total

HSIP-funded projects at intersections:\*

**136** PROJECTS INSTALLED EDGE OR SHOULDER RUMBLE STRIPS

**47** PROJECTS WIDENED THE INTERSECTION

**4** PROJECTS APPLIED HIGH FRICTION SURFACE TREATMENTS

\*Other projects may have incorporated these strategies into larger efforts but are not represented in the database.

This information comes from 2021 State HSIP reports. To view individual reports, visit <https://safety.fhwa.dot.gov/hsip/reports/>.

1 Fatality Analysis Reporting System (FARS): 2006-2019 Final File and 2020 Annual Report File (ARF), report generated September 20, 2022, <https://cdan.dot.gov/query>.

2 FHWA, "About Intersection Safety" (May 2022), <https://safety.fhwa.dot.gov/intersection/about/index.cfm>, and "Safe System Intersections" (March 2021), <https://safety.fhwa.dot.gov/intersection/ssi/index.cfm>.

# Intersection Countermeasures

FHWA lists seven Proven Safety Countermeasure (PSCs) for intersections, all of which are eligible for HSIP funding:

- Backplates with Retroreflective Borders
- Reduced Left-Turn Conflict Intersections
- Corridor Access Management
- Roundabouts
- Left- and Right-Turn Lanes at Two-Way Stop-Controlled Intersections
- Systemic Application of Multiple Low-Cost Countermeasures at Stop-Controlled Intersections
- Yellow Change Intervals

In addition to these intersection-specific improvements, many other PSCs can help prevent fatal and serious injury crashes at intersections, including leading pedestrian intervals, crosswalk enhancements, pedestrian hybrid beacons, and lighting. For more information, visit <https://safety.fhwa.dot.gov/provencountermeasures/>.

In 2021, HSIP funded more than 200 projects dedicated to intersection PSCs, including\*



**159**  
ROUNDBOUT  
PROJECTS



**16**  
LEFT- AND RIGHT-  
TURN LANE PROJECTS



**30**  
RETROREFLECTIVE  
BACKPLATE PROJECTS

\*The database counts only projects with reported codes specific to a PSC. FHWA estimates the number of projects that incorporate PSCs to be much higher. To view individual reports, visit <https://safety.fhwa.dot.gov/hsip/reports/>.

## HSIP in Action

### All-Way Stops to Enhance Rural Intersection Safety

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT)

Like many other States, rural intersection safety is a major concern for the NCDOT. In 2019 alone, the State saw 15,000 frontal-impact crashes at rural intersections that resulted in more than 300 fatalities. Systemically improving rural intersection safety in North Carolina is an enormous task because 81 percent of the State-owned system—more than 65,000 miles—comprises secondary routes.

As of 2020, NCDOT has used HSIP and other funds for more than 150 projects that converted two-way stop-controlled intersections (TWSC) to all-way stop-controlled intersections (AWSC). A study of the first 50 projects showed a **68-percent reduction in total crashes** and a **77-percent reduction in fatal and injury crashes**.<sup>3</sup> A 2020 follow-up study of 36 locations found that conversions eliminated fatal and severe injuries and reduced other crash types by 60–75 percent!

#### PROBLEM

Crashes  
at Rural  
Intersections



#### SOLUTION

Two-Way Stop to  
Four-Way Stop  
Conversions



#### RESULT

Zero Fatal & Severe  
Injury Crashes at  
36 Locations



<sup>3</sup> Simpson, C.L. and J.E. Hummer, "Evaluation of the Conversion from Two-Way Stop Sign Control to All-Way Stop Sign Control at 53 Locations in North Carolina." *Journal of Transportation Safety and Security*, Vol. 2, No. 3, 2010, 239-260.

To find out how HSIP can help save lives in your community, contact your State DOT:

<https://www.fhwa.dot.gov/about/webstate.cfm>



Have an HSIP success story? Share your projects on Facebook, Twitter, and Instagram with #HSIPsavesLives.

**ZERO** IS OUR GOAL  
A SAFE SYSTEM IS HOW WE GET THERE



U.S. Department of Transportation



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Federal Highway Administration