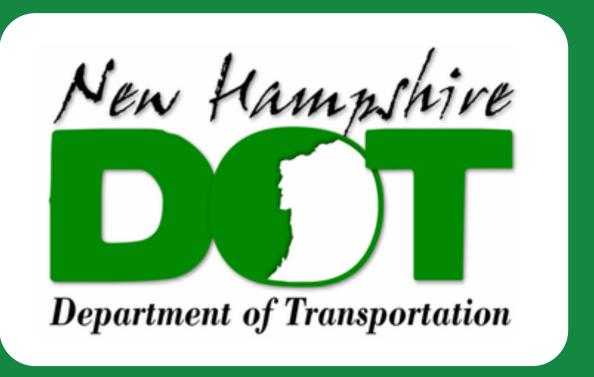
NHDOT TWO-WAY TO ALL-WAY STOP PROGRAM





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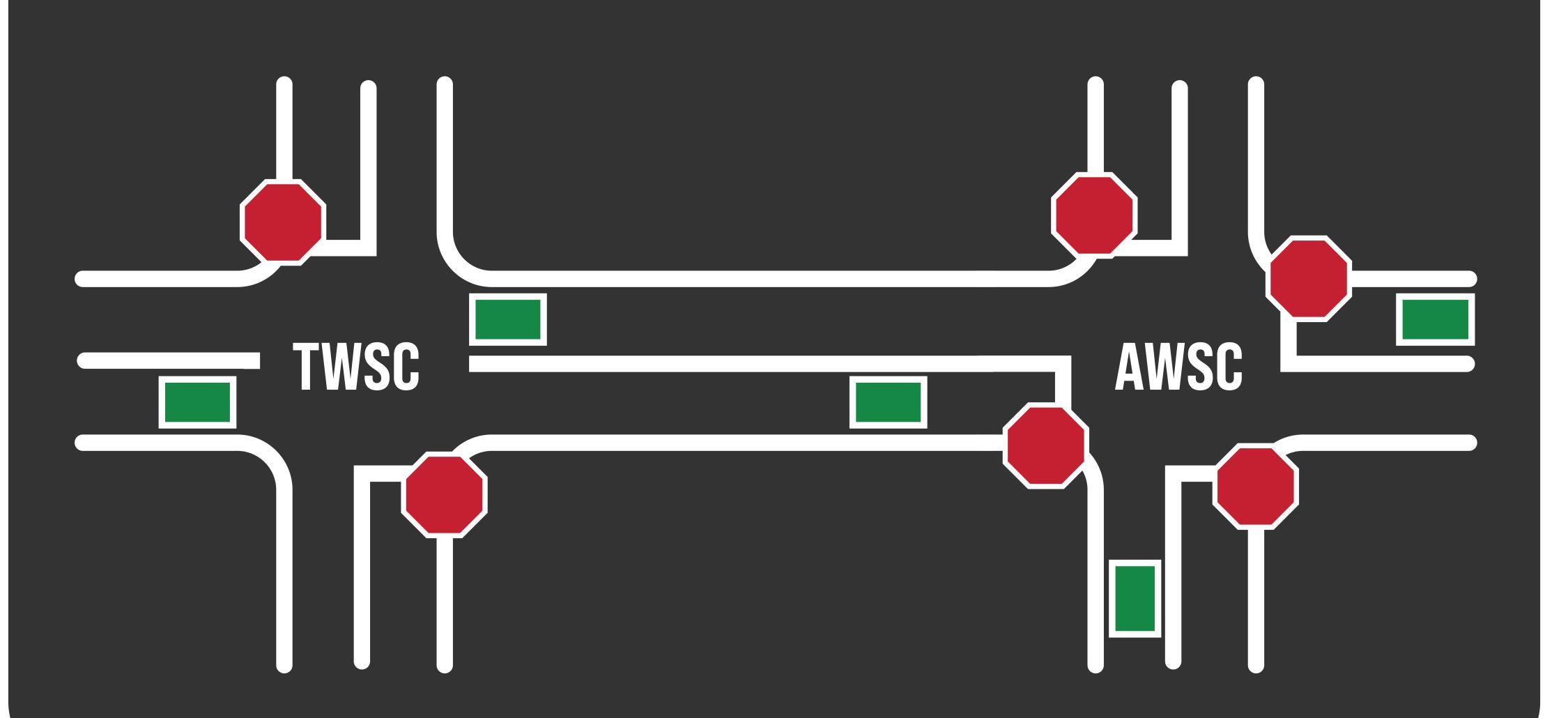
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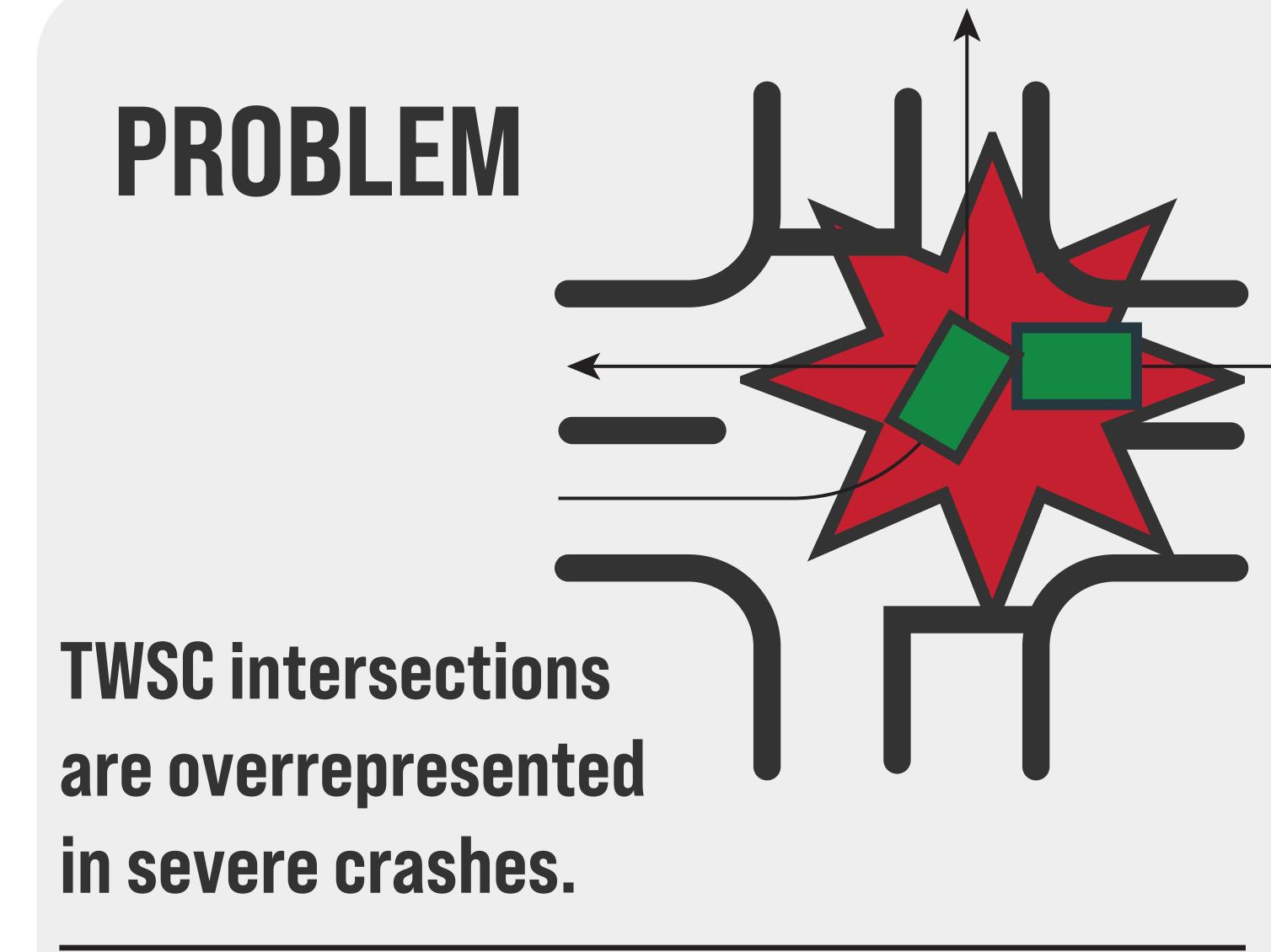
EXECUTIVE SUMMARY

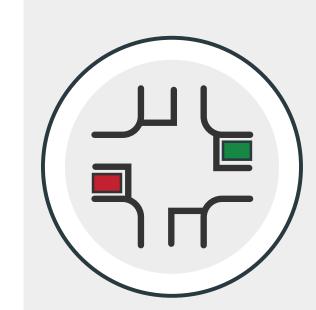
NHDOT is implementing all-way stop control (AWSC) as a systemic safety improvement in rural areas. While AWSC is not new or innovative, it represents a paradigm shift for our agency. We hope to extend our success and promote AWSC as a Safe System strategy to reduce fatal and serious injury crashes nationally.

Like most states with significant miles of rural roads, New Hampshire has a long list of rural intersections with two-way stop control (TWSC). We spend excessive time and energy responding to crashes or, more frequently, complaints about near misses and high speeds. In the past, we focused on the minor road by emphasizing the STOP (advance warning, increased size, enhanced conspicuity). Another "pilot" project is evaluating Intersection Conflict Warning Systems (ICWS) at three problematic locations. None of these measures seem to "solve" the intersection safety concerns.

Two States (DE and NC) recently received national awards for systemic TWSC to AWSC conversions. At the same time, NHDOT converted a series of intersections to AWSC as a "last resort" after other countermeasures failed. Based on those successes, NHDOT is now developing a more comprehensive AWSC program and pursuing opportunities (research problem statement) to extend our research to other States and establish AWSC at rural intersections as a national proven safety countermeasure.







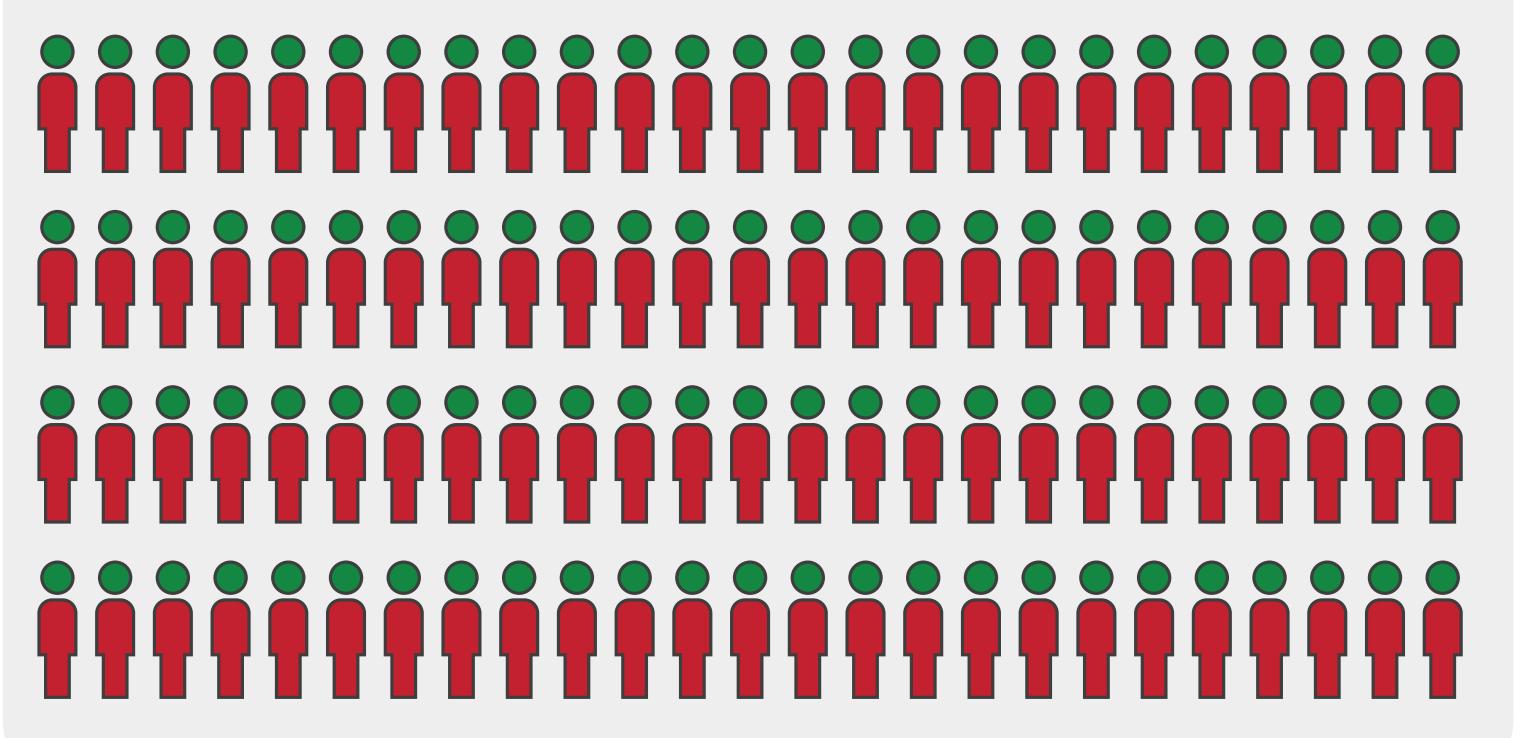
Intersections

are 1 of 10 critical emphasis areas in SHSP



Intersection-related fatalities remain relatively constant in NH

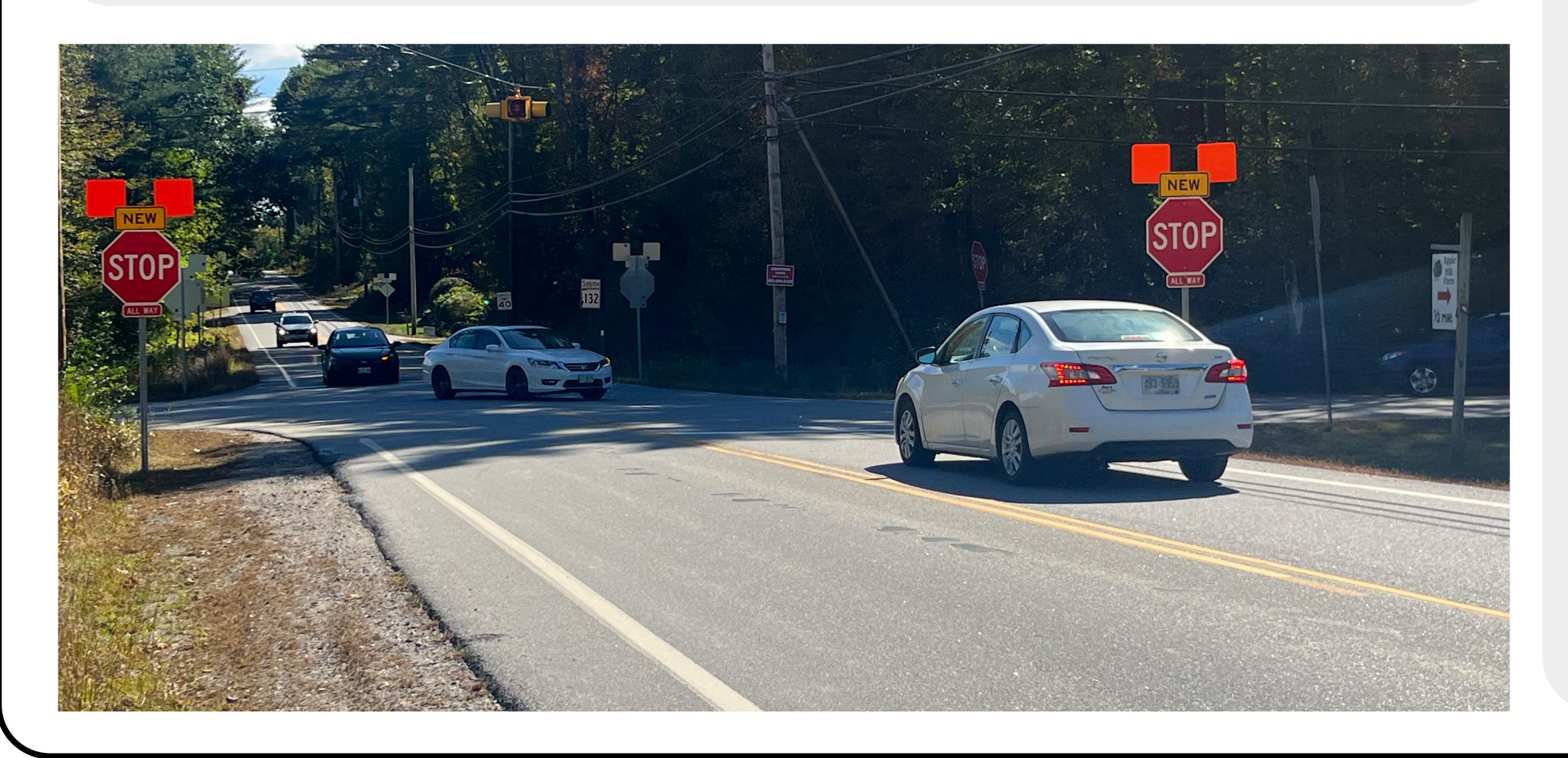
100+ intersection-related fatalities and serious injuries annually



OBJECTIVES

- 1. Develop criteria for converting TWSC to AWSC.
- 2. Study effectiveness (safety, behavior, operations).
- 3. Generate national interest (research problem statement).

National Roadway Safety Awards		Delaware	North Carolina
Initial Conversions		20 intersections (2017 – 2020)	450+ conversions (2020 – present)
Screening Method		Political / community requests	9+ frontal impact crashes in last 10 years
Crash Reductions	Total	71%	55%
	Injury	90%	92%
	Fatal	75 %	100%
Benefit Cost Ratio			83:1



POTENTIAL SCREENING CRITERIA

- Crash history
- Traffic volume combinations
- Non-traditional through movements (90 degrees)

STUDY DESIGN

- Performance Measures
 - Safety performance by frequency of crashes by type and severity
 - Surrogate safety measures such as near misses and motorist behavior
- Data Collection
 - 3 to 5 years of before and after crash data
 - Video-based before and after data for surrogate measures
- Analysis Methods
 - Before-after for crash-based safety measures
 - t-test for surrogate measures

NEXT STEPS

- Generate support for NCHRP study
- Demonstrate effectiveness and limitations
- Promote as proven safety countermeasure