

*REPORT TO THE LEGISLATURE
PURSUANT TO ACT 165 SECTION 46:*

**REPORT ON THE OPERATION
OF BICYCLES AT CONTROLLED
INTERSECTIONS**

Legislative Report Presentation

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Submitted by:

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Report on the Operation of Bicycles at Controlled Intersections

LEGISLATIVE REPORT (2024 T-Bill, Sec 46)

THE REQUEST:

- Identify potential effects from enabling individuals operating a bicycle at intersections, rights and responsibilities that differ from individuals operating a vehicle.

FACTORS FOR CONSIDERATION:

- PRIMARY -- To enhance safety and mobility of bicyclists at intersections.
- SECONDARY -- To encourage mode shift and other co-benefits.

STUDY TASKS:

- Conduct an evidence-based review to evaluate effectiveness of provisions to improve safety at intersections and/or address existing concerns.
- Identify impacts and considerations that may be necessary should one or more of the scenarios be further considered and/or implemented in Vermont.

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Section 1.3 – Review of Scenarios

Allow an individual operating a bicycle the right to:

- 1) Treat a **stop sign** as a **yield sign**, known as ‘Stop-As-Yield’;
- 2) Treat a **flashing red light** at a traffic signal as a **yield sign**;
- 3) Treat a **steady red light** at a traffic signal as a **stop sign**; and
- 4) Proceed through a signalized intersection **when a pedestrian signal is in** a leading pedestrian interval phase, **the walk or countdown phase**, and traffic signal for vehicles is red for parallel through and/or turning traffic.

For ALL Scenarios:

NO CHANGE → Who has the right-of-way at the intersection.

CHANGE → How an individual proceeds through the intersection.

Slow speed &
prepared to stop,
if necessary.

Come to complete
stop (foot down),
proceed with
caution.

VS

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Section 2.1 - Existing Conditions: Vermont Traffic Law

As defined in Vermont law, a bicycle and motor vehicle are separate road user categories. Key distinction for classification of mode is by difference in power (source of propulsion).

Bicycle¹ defined as “...pedal-driven device propelled by human power having two or more wheels...” (19 V.S.A. § 2301(1))

Motor Vehicle defined as “...vehicles propelled or drawn by power other than muscular power...” (23 V.S.A. § 4(21))

Vermont law requires cyclists to respond to traffic signs and signals following the same instructions as required by the driver of a vehicle, *minus any exceptions granted in statute.*

“Every person riding a bicycle is granted all of the rights and is subject to all of the duties applicable to operators of vehicles...” (23 V.S.A. § 1136)

¹ Per statute 23 V.S.A. § 4(46(A)) and 23 V.S.A. § 1136a, an electric bicycle shall be subject to all the rights and duties applicable to bicyclists.

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Section 2.3 - Existing Conditions: Education of All Roadway Users on Vermont Law

A Safe Transportation Network

- Laws define rights of way to provide for the orderly movement of road users
- Laws address highway safety, inclusion and mobility of all road users, and travel efficiency
- Effectiveness predicated on the compliance of all road users to adhere to the defined rules of the road per their mode of transport (motor vehicle, bicycle, or pedestrian).



Statewide Safety Outreach & Education Programming in Vermont

A network of entities collectively work to encourage safe walking and bicycling from a variety of perspectives—highway safety, accessibility, modal shift, general health and well-being.

Programs to influence attitude and behavior change are conducted through ongoing efforts:

- **Event specific programs teach participants curriculum** on how to safely travel. Examples: Driver Education, Youth Bike Smart
- **Cyclical media education campaigns** which provide a timed punch of outreach on topics. Example: Watch For Me VT

DRIVERS EDUCATION

YOUTH BIKE SMART/WALK SMART PROGRAMS

ADULT BIKE SAFETY PROGRAMS

DRIVE WELL VERMONT CAMPAIGN

WATCH FOR ME VT CAMPAIGN

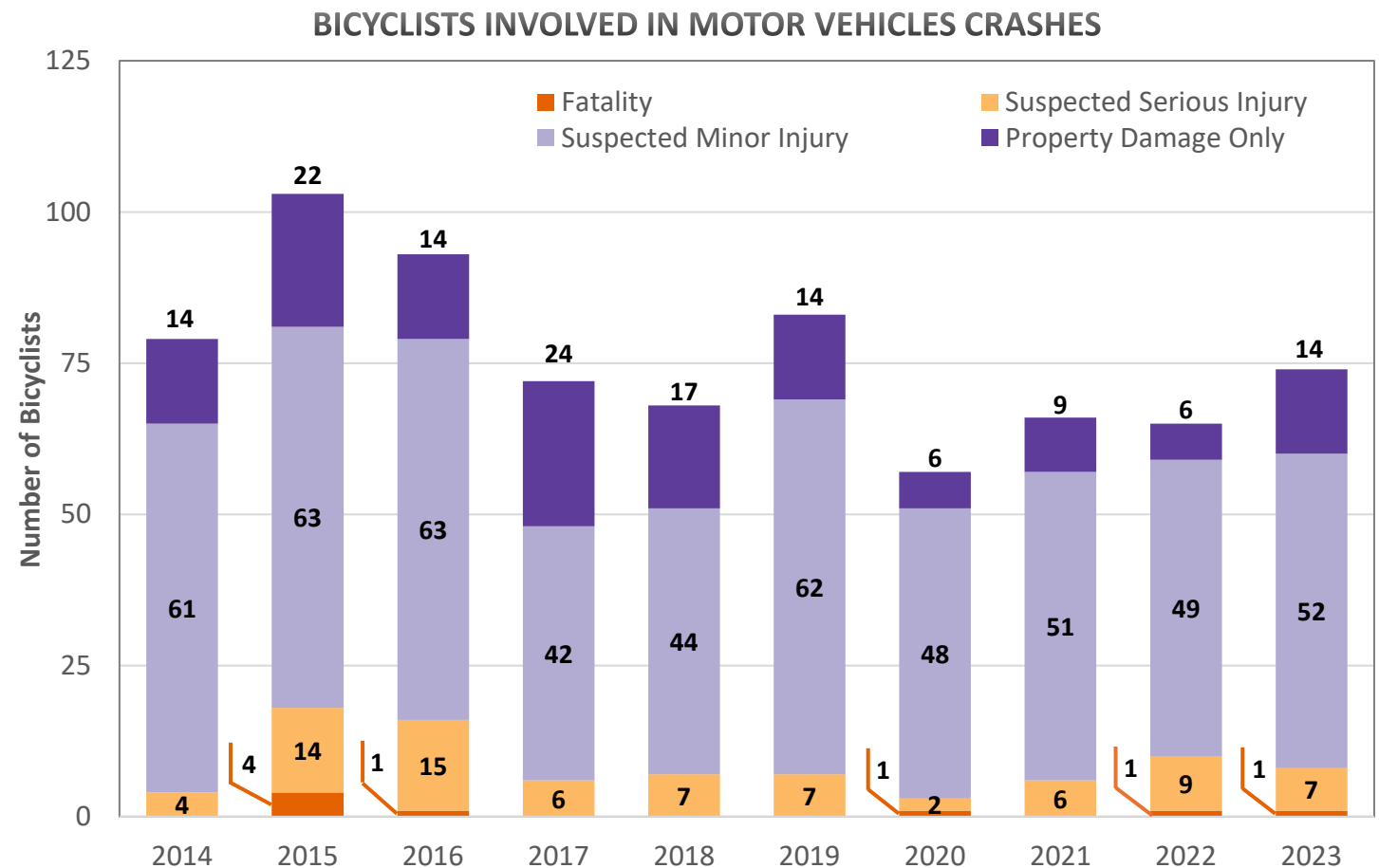
OUR ROADS, OUR SAFETY CAMPAIGN



Report on the Operation of Bicycles at Controlled Intersections

Section 2.2 - Existing Conditions (2014 – 2023)

- In a 10-year period, **760 motor vehicle crashes occurred that involved bicyclists.**
- **55% were recorded as occurred “at intersections”**, occurrences may be as high as 75% if include crashes near intersections.
- **59% occurred in Chittenden County greater Burlington area** (Burlington, South Burlington, Colchester, Essex, Williston, and Winooski).
- **11% were “major crashes”**, which include incidents that result in a cyclist fatality (**8**) or suspected serious injury of cyclist (**77**).



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Section 2.2 – Existing Conditions (2014-2023)

Behavioral Factors Contributing to Crash Events

From accounts of operator behavior just prior to the crash, “failed to yield right of way” was the third most frequent circumstance recorded

From Driver’s perspective:

- *No improper driving*
- *Inattention*
- *Failed to yield right of way*

From Bicyclists’ perspective:

- *No improper action*
 - *Improper crossing*
 - *Failed to yield right of way*
-

Data Subset: 85 Major Motor Vehicle Crashes Involving Cyclists

Summary of Evidence-Based Review

- Crash records provide insights on behavior and circumstance, however, further analysis hindered by gaps in the reported data.
- No citations were issued to cyclists for actions attributed to conducting a rolling stop at intersections or other behaviors at intersections, based on review of judiciary records.
- Signal- and sign-controlled intersections occur statewide on state and local networks.

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Section 3.0 - State of the Practice Nationally

Impact of Provisions on Safety Measures

Impetus for Idaho's provision -- Idaho actively ticketed cyclists

- Reduce # of technical violations in court from incomplete stop at stop signs. *Complete stop = foot down.*

1 state has allowed bicyclists to utilize a pedestrian signal

10 states have a variation of "Stop-as-Yield" (SAY)

- No research to date has found significant reductions in crashes in states with SAY law provisions.
 - Based on 2024 before-after study¹: Percent change in total crashes in four states with SAY laws (DE, AR, OR, and WA) did not consistently differ relative to the average of selected states without SAY laws.
- NHTSA endorsed (2023) as a safety protection provision; allow cyclists to mitigate risk to their advantage, increase their visibility to drivers and reduce exposure.

Dissemination of Safety Education

State Highway Safety Offices (SHSO)

- State entity to administer the National Highway Traffic Safety Administration (NHTSA) federal highway safety grant program.
 - Lead entity to facilitate safety education programs
 - Entity may or may not be affiliated with AOT/DOT

Multipronged Approach for Effectiveness

- To gain a broad public awareness, education of rules of the road needs to be actively pursued.
 - In addition to media campaigns, incorporate provisions into the driver handbook².

1 - 2024, Mahdinia et al., "Evaluate the Safety Effects of Adopting a Stop-as-Yield Law for Cyclists in California" <https://rosap.ntl.bts.gov/view/dot/77179>

2 – 2023. Hurwitz et al., "Impact of Bicycle Rolling Stop Laws on Safety-Relevant Behaviors in the Pacific Northwest." [Article link](#)

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Section 4.0 - Direct & Indirect Impacts: Perspective of Traffic Safety Professionals

Identify the immediate impacts to the “Agency” (inclusive of AOT, DPS and DMV), if Vermont state law permitted individuals operating a bicycle at intersections, under specific traffic control conditions, rights and responsibilities that differed from those applicable to individuals operating a motor vehicle.

4.1 Vermont Laws

Requires an amendment to statute.

- Provisions should address how each road user is to proceed in their direction of travel, identify the exemptions applicable to specific road users, and convey what actions may be a violation of statute.

4.2 Informing the Professionals

Requires dissemination of information to a broad range of professionals statewide.

- Coordination within AOT, DMV, and DPS to ensure changes to laws are conveyed to all professionals in safety education, enforcement and vehicle administration.
- Stakeholders at all three state agencies have responsibilities for the conveyance of motor vehicle laws and guidance for safe travel on highways.

AOT – Agency of Transportation, DMV – Department of Motor Vehicles, DPS – Department of Public Safety

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Section 4.0 - Direct & Indirect Impacts: Perspective of Traffic Safety Professionals

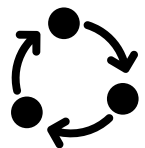
4.2 Informing the Professionals

Statewide Network of Professionals Engaged in Traffic Law Education & Enforcement

- Primary stakeholders would determine the scope necessary to further disseminate the information and integrate it, as needed, into programmatic material and training.

ENTITY	STAKEHOLDER	PROGRAMS TO INFORM
ALL	Agencywide	General Awareness
AOT	State Highway Safety Office (SHSO)	Safety Education Programming (Local Motion, VT Dept. of Health, etc.) Enforcement Programming (Law Enforcement, etc.)
DMV	Driver Education Division	Driver's Education Curriculum; Driver Schools & Trainers
DMV	Education & Safety Unit	School Bus Driver Training; Pupil Transportation Safety
DPS	Vermont State Police	Officer Training & Professional Development (Policy Academy, In-service Training, etc.)

4.3 Informing the Public



Statewide Safety Outreach & Education Programming in Vermont



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4.3 Informing the Public

Statewide Safety Outreach & Education Programming in Vermont

Agency Safety Education Programming

Strategic Highway Safety Plan guides the funding and programming conducted statewide.

- A network of entities collectively work across a variety of perspectives.
- Supported under NHTSA Federal Grant Program

Vermont Annual Grant Application FFY2025 – Identifies the annual recipients (partners and programs) of NHTSA funding.

EDUCATIONAL EMPHASIS AREAS

- Young Drivers
- Vulnerable Users
- Distracted Driving
- Impaired Driving
- Motorcycle Safety
- Occupant Protection

STRATEGIC PARTNERS

- Educators
- Law Enforcement
- First Responders
- Engineering
- Data Managers
- Municipalities
- Non – Profits

Examples of FFY2025 Safety Education Programming:

- ✓ VDH Road Users Safety Group – Watch For Me VT
- ✓ Local Motion – Bicycle & Pedestrian Safety Programs
- ✓ Chittenden County Sheriff’s Department – Bike Safety Education
- ✓ Town of Milton – Safe Streets/Bike Safety
- ✓ County & Local Law Enforcement – Community Safety Programs



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Section 5.0 - Summary

- Evidence-based analysis did not clearly define a safety benefit, however, there are assumed safety benefits that would be attained from the reduced bicyclist exposure time and increased bicyclist visibility.
- Legislation allowing increased bicyclist permission at controlled intersections would result in required actions by multiple stakeholders surrounding
 - legislation development,
 - information dissemination to professionals, and
 - multi-pronged approach to inform and educate the public.
- Highway safety education programming in Vermont is primarily supported under the National Highway Traffic Safety Administration (NHTSA) federal grant program. This program provides for the development and implementation of highway safety education efforts in Vermont.
 - To be at the ready to conduct education and outreach at the onset or prior to a future change in state, timing both for the development of material and alignment of this activity with the NHTSA grant program cycle are important factors for consideration.