



Proposal: Walk/Bike Road Safety

Presented to the Bristol
Selectboard 11/22/2021

Formation of Residents' Committee

- Committee formed based on resident complaints about closed crosswalks, including petition to reduce speed limit circular
- Began meeting in July 2021, and reviewed all materials shared as well as research on traffic calming. Later added in members who previously spoke to SB.
- **Committee members:** Jessica Teets, Sally Burrell (Energy Committee), Chris Urban, Mary Yates, and Melanie Kessler (Regional School Coordinator, Local Motion)
- **Committee resources:** Michele Gilbert (RiseVT), Mike Winslow (ACRPC), Jonathon Weber (Complete Streets Program Manager, Local Motion), Eric Cota (Roads), and Bruce Nason (BPD)



THANK YOU
Volunteers!
We couldn't do it without you

Our Vision

- We envision a Bristol where children walk or bike safely to school, and where residents walk dogs and commute by bicycle, on foot, or with a mobility device, AND where drivers have a sense of what to expect from bikers and pedestrians.
- In addition to reducing pollution and improving resident health, walkable towns increase the civic interaction so important to the health of a small town.
- Additionally, walkable towns create a vitality that draws customers and visitors into local businesses, improving the economic health of the community and building a strong base of tax revenue to invest back into our community.
- With a compact settlement pattern and connected street grid, Bristol is exceptionally well-positioned to become one of the best small towns for walking and biking.
- The proposals outlined below focus on improving road and sidewalk safety such that residents and visitors feel comfortable walking and biking around Bristol.

Best Practices for Safe Roads and Sidewalks

- Slowing traffic is key to creating safe, walkable, and bikeable environment.
- Research shows that three strategies together, rather than any one on its own, most effectively slow traffic:
 1. Traffic calming measures – visual cues to drivers to slow down
 2. Speed limit reductions
 3. Education (enforcement)



Proposed Selectboard Actions

1. For next fiscal year, increase Roads budget to:
 - Install advisory bike lanes on Pine & North
 - Install speed table/raised crosswalks in 3 locations
 - Install RRFB and bollards in selected locations
2. Lower speed limit to 25mph throughout town
 - Increase BPD enforcement
3. Create walk/bike advisory committee and budget



1a. Traffic Calming: Bike Lane

- Install advisory bike “edge” lane on Pine Street
 - Traffic calming by narrowing the roadway visually
 - Users have right-of-way in edge lanes, while motorists share center lane, using edge lanes when passing oncoming vehicles while yielding to users



1a. Traffic Calming - Bike Lane

- Paint bike lanes on both sides of North Street from Main St. to Pine St.
 - Striping bicycle lanes will also narrow travel lanes, having traffic calming effect
 - These lanes will also align with the proposed Addison Triangle Bike Loop for connecting Vergennes and Middlebury with Bristol.
- **Vermont examples:** Barre, Booth Woods in Vergennes, Weybridge Rt. 23 near Middlebury border, Berlin, Lincoln, Danville, and Burlington.



Cost Estimates

- Advisory Lanes Initial installation: \$8,400 for both Pine and North Streets
 - Cost per Mile (without 4" White line): waterborne Paint \$4,200; Cost per Mile with 4" White line: \$14,600
 - Cost estimates per 2020 VTrans Bicycle and Pedestrian Program Unit Cost Report
- Annual maintenance budget: restriping should be budgeted yearly at about \$5,000 using waterborne paint.

1b. Traffic Calming - Speed Tables/Raised Crosswalks

- **Install speed tables or raised crosswalks** - long raised speed hump with a flat top and more gradual ramps that allow plowing and do not need to be removed in the winter
- Place at 3 locations as vehicles first enter town to slow traffic:
 - West Street crosswalk by the Fire station
 - North Street crosswalk by Pine
 - East Street crosswalk by Mountain
 - Shift the crosswalk for better sight lines?
- Vermont examples: Huntington, Barre, South Burlington



1b. Traffic Calming – Beacons & Bollards

- Install RRFB at 2 locations: North-Pleasant intersection (school crossing); and East-Mountain intersection
 - West-Firehouse intersection already approved by selectboard
- Maintain bollards at Fitch (for BES) and seasonally at Maple-West intersection (creemee stand)
- Vermont examples: Bristol, Vergennes, and Middlebury



Cost Estimates

- Speed hump/raised crosswalk – approximately \$2,000 each
 - Annual maintenance includes repainting advance warning marks
- RRFBs: \$10,000 each (inclusive of materials, equipment, and labor)
 - From 2020 VTrans Bicycle and Pedestrian Program Unit Cost Report
 - No annual maintenance, good possible candidate for grant funding
- Bollards = ~\$350 each
- **Both raised crosswalks and RRFBs are low cost-high benefit solutions:**
 - Northhampton Planning Commission: “Speed humps are relatively inexpensive, often in the range of about \$2,000 dollars, and they are very effective at slowing travel speeds and reducing accidents. They are also relatively easy for bicycles to cross. On average, a 12-foot long hump reduces 85th percentile travel speeds by 22 percent. Speed tables are smoother on large vehicles, though slightly less effective. On average, for a 22-foot speed table, there is an 18 percent reduction in 85th percentile travel speeds.”
 - Vtrans: “The RRFB offers significant potential safety and cost benefits, because it achieves very high rates of compliance at a very low relative cost in comparison to other more restrictive devices that provide comparable results, such as full midblock signalization.”

2. Speed Reduction

- **Reduce** the speed limit in town to 25 mph (town responsibility)
- **Apply** to VTRANS to reduce speed to 25 mph on east/main/west street through town
 - Mike Winslow can provide assistance with the speed studies for the application
- Vermont recent example: East Middlebury along VT 125 and VT 116



3. Education

- **Enforcement** - regular presence of law enforcement to create a reputation that area policed
 - Request temporary assistance from state PD if need more capacity?
- **Install signage** for Pine and North St. bike lanes
 - Maintain use of solar-powered speed indicators where speed is first reduced
- **Pilots** - conduct before and after studies to document effectiveness, and share publicly; discontinue ineffective interventions and try effective interventions in other locations

Sustainability

To ensure that this focus on walk/bike safety continues to receive attention, we suggest:

- Establish dedicated funding for walk/bike infrastructure improvements in budget
- Form Walk/Bike Committee to support and advise on traffic calming initiatives, infrastructure investments, events, etc.
 - Committee should meet regularly with planning committee and Eric to discuss issues and potential solutions, give feedback on annual work plans, budgets, and project designs, and hear and respond to resident concerns related to walking and biking.
- Appoint representative from Walk/Bike Committee to serve on Addison County Regional Planning Commission.

Potential Funding Sources

- In addition to being added to annual budget:
 - Forthcoming infrastructure bill funding
 - VTrans grant – annually \$3 million
 - Community Change Grant program supports the growing network of advocates, organizations, and agencies working to advance walkability
 - RiseVT Amplify Grants (\$250-\$1,500 each)

THANK YOU FOR LISTENING
ANY QUESTIONS?

