



# Pedestrian Safety Action Plan

Town of Brunswick



**MaineDOT**

March 2021



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# Heads Up Project Overview

The Maine Department of Transportation (MaineDOT) has partnered with the Bicycle Coalition of Maine (BCM) and 21 communities across Maine to facilitate a series of public meetings addressing pedestrian safety. As part of the **Heads Up Pedestrian Safety Initiative**, these meetings:

- collected information on locations the residents felt were unsafe;
- identified possible infrastructure changes to improve pedestrian safety; and
- discussed specific educational and law enforcement interventions that might improve driver and pedestrian behavior.

The aim of the project is to explore potential short-, medium-, and long-term mitigation strategies to improve pedestrian safety and reduce crashes.

## Purpose and Need

From 2003 to 2014, the number of persons killed while walking on Maine's roadways hovered between 7 and 13 per year. Like many other states across the country, beginning in 2015 and extending through 2017, Maine, experienced a sharp increase in pedestrian fatalities, reaching a Maine's high of 19 in 2017. In 2018, Maine had only 6 fatalities, but 2019 continued the trend of higher numbers with 18 pedestrian deaths.

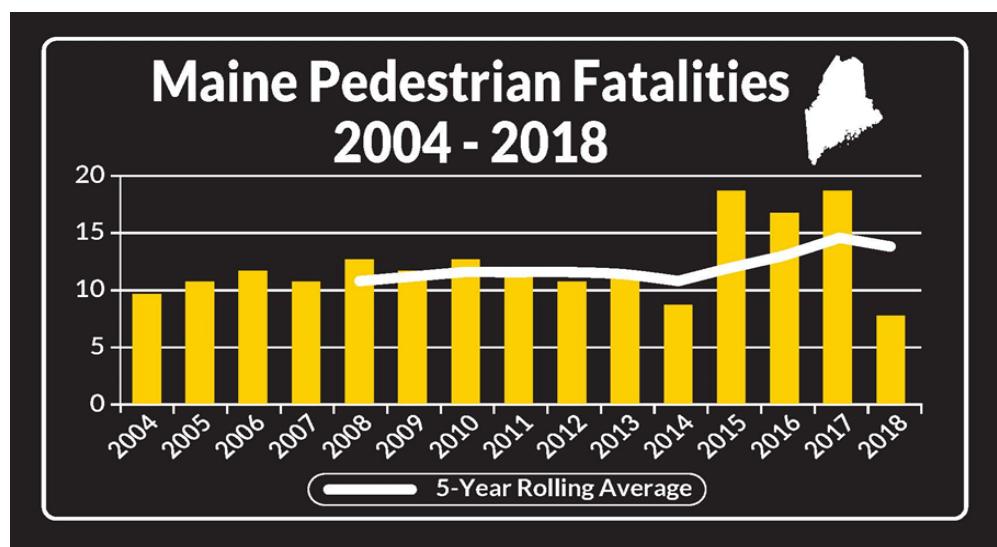


Figure 1: Maine Pedestrian Fatalities (2004 - 2018)

Maine's crash data indicates this increase in pedestrian fatalities has no clear single cause, but is the result of a combination of factors that include roadway design and risky behaviors by both drivers and pedestrians.

In late 2016, MaineDOT initiated a process to engage the public in efforts to improve pedestrian safety. MaineDOT's Safety Office identified 21 communities that experienced the highest number of pedestrian crashes between 2011 and 2015, often representing the state's most densely populated and "urbanized" areas. The identified 21 "Focus Communities" in alphabetical order are:

1. Auburn	8. Camden	15. Saco
2. Augusta	9. Hallowell	16. Sanford
3. Bangor	10. Lewiston	17. South Portland
4. Bath	11. Old Town	18. Topsham
5. Biddeford	12. Orono	19. Waterville
6. Brewer	13. Portland	20. Westbrook
7. Brunswick	14. Rockland	21. Winslow

*Figure 2: Heads Up Pedestrian Safety Project - Focus Communities*

The **Heads Up Pedestrian Safety Project** was launched in 2017 and is anticipated to run at least through 2020.

This initiative includes the following activities for each of the 21 Focus Communities:

1. Convene and facilitate **Community Pedestrian Safety Forums** with community leadership, residents, and interested stakeholder groups to define local issues, review the community's pedestrian crash data, and identify / prioritize the locations of primary risk and need.
2. Facilitate an infrastructure **Site Safety Reviews** with municipal staff and other interested parties, in which the top 5 (and in some cases, more) problem locations identified by the community at the **Pedestrian Safety Forum** are analyzed for possible infrastructure changes (e.g. painting crosswalks, changing curb lines, adding refuge islands, adding signs, etc.).

3. Convene and facilitate ***Safer Walking Behavioral Forums*** for community leadership, residents, and interested stakeholder groups that focus on identifying priority problem behaviors, and then brainstorming educational and law enforcement interventions to improve safety for pedestrians.
4. Collaboratively develop with each municipality, a community specific ***Pedestrian Safety Action Plan*** (strategy) that incorporates both long-term and short-term alternatives for reducing the number of pedestrian crashes. A wide variety of possible mitigation recommendations were identified and are organized according to the classic Safe Routes to School "5 E's" model: Engineering, Education, Encouragement, Enforcement, and Evaluation. These strategies address policy, growth, infrastructure, education, outreach, and law enforcement.
5. Collaborate with local law enforcement to implement a ***Pedestrian Safety Enforcement Program*** that supports police officers proactively interacting with individuals engaged in behaviors that may put pedestrians at risk. Program supports include technical assistance, education, outreach, handouts, and high-visibility safety items to distribute.

## Brunswick's Process and Results

### Community Pedestrian Safety Forum

The ***Community Pedestrian Safety Forum*** was held in Brunswick on April 18, 2018 and was attended by 52 people. Participants at the forum included municipal officials, MaineDOT and BCM staff, and the general public. Participants used TurningPoint® real-time polling technology to gather key information from participants, which showed that:

- 62% of participants were from the general public
- 62% described their walking habits as "for exercise and errands"
- 70% said that roadway safety was the combined result of drivers, persons walking, and road design.

At the forum, the following locations were identified as "priority" problem locations needing attention. Locations were identified as the places ranked as "highest" or "high" priority for attention by a majority of the participants.

Priority Locations	% High Priority	Rank	Participant Comments <i>Please Note: Public perceptions may differ from the actual conditions</i>
<b>Intersection of Stanwood, Mill and Pleasant Streets</b>	68.0%	1	<ul style="list-style-type: none"> <li>“Speeding traffic”</li> <li>“No crosswalks”</li> <li>“Lack of ADA features &amp; access”</li> <li>“No sidewalks on Stanwood”</li> </ul>
<b>Cooks Corner Area</b>	64.3%	2	<ul style="list-style-type: none"> <li>“No crosswalks”</li> <li>“No sidewalks”</li> <li>“Speeding traffic”</li> <li>“Signals not working well”</li> </ul>
<b>Intersection of Cressey Road with Mason, Federal and Water Streets</b>	64.0%	3	<ul style="list-style-type: none"> <li>“Speeding traffic”</li> <li>“No crosswalks”</li> <li>“Crosswalks not visible enough”</li> <li>“Poorly lit”</li> </ul>
<b>Intersection of Jordan Avenue and Bath Road</b>	57.0%	4	<ul style="list-style-type: none"> <li>“Speeding traffic”</li> <li>“No crosswalks”</li> </ul>
<b>Woodside Road between Church Road and Pleasant Hill Road</b>	29.6%	5	<ul style="list-style-type: none"> <li>“No space for persons walking”</li> </ul>

Figure 3: Brunswick's Priority Locations

## Site Safety Review

A site visit in Brunswick occurred on May 17, 2018 during which priority locations were discussed using satellite photos, in-person visitation, and local expertise. The site visit included staff from the MaineDOT, BCM, and the municipality. Measurements and observations were made during the visits, and conversations regarding problems and possible solutions were held.

Notes from the meeting and recommendations are included in the Engineering / Infrastructure section of this report.

## Safer Walking Behavioral Forum

On May 17, 2018, 18 people, including Brunswick residents, staff from MaineDOT, BCM, and the town, participated in the ***Safer Walking Behavioral Forum***. At this forum, participants reviewed the priority locations identified in the ***Community Pedestrian Safety Forum***, as well as the behavioral issues (speeding, failure to yield, pedestrian actions) that were associated with each. The group was asked to prioritize the behaviors they identified as most problematic on the part of drivers, bicycle riders (who often came up as problems), and pedestrians. Focused discussions explored potential education strategies and law enforcement efforts to improve behavior. The forum included a call for local champions to advocate for and implement proposed interventions.

The most problematic behaviors identified by Brunswick residents at this forum were as follows:

- **Most Problematic Pedestrian Behavior:** Distracted / Inattentive Pedestrians
- **Most Problematic Bicycle Behavior:** Ignoring Traffic Signs / Signals
- **Most Problematic Motorist Behavior:** Distracted Driving

Recommendations from the ***Safer Walking Forum*** to address pedestrian and motorist behaviors are included in the Education and Enforcement sections of this report.

Recommendations to address bicyclist behaviors were not discussed during the forum and therefore no recommendations have been included within this report. The problem behaviors of cyclists are only provided as a forum observation and could be useful for future mitigation efforts.

# Brunswick's Recommendations

This report provides a series of recommendations based on the forums, site visits, examinations of aerial photos, reviews of existing plans, and conversations with stakeholders to improve pedestrian safety in Brunswick. Please note the all recommendations are based upon current best practices and that all resources referenced and provided within the Appendices are current at the time this report was produced.

**The recommendations in this plan are non-binding but may drive the development of new policies and procedures relating to the implementation of this report's "Objectives" and "Potential Actions." The implementation of recommendations throughout this report are dependent upon fiscal and staff resource limitations and will be driven by the project prioritization strategies of both MaineDOT and/or the town of Brunswick.**

The recommendations are organized according to the classic Safe Routes to School "5 E's" model: Engineering, Education, Encouragement, Enforcement, and Evaluation. Sound engineering is essential to promote encouragement, must align with education, and is necessary to support enforcement efforts.

Recommendations are further organized into timeframes, with "Short-Term" meaning <1+ year implementation window, "Medium-Term" meaning 1-5+ year implementation window, and "Long-Term" meaning a >5-year implementation window. Note that Short-Term and Medium-Term mitigations should not necessarily be abandoned after the implementation windows proposed here. Consideration for future implementation and their use should be a routine and on-going community conversation.

# Engineering

The built environment is an important factor affecting roadway safety, as conditions on the ground will influence the behavior of all users. Historically, many roadways were designed for higher vehicle speeds and shorter travel times. Complete Streets Policies implemented by MaineDOT and many other communities attempt to address the needs of all roadway users by redesigning infrastructure where feasible to reduce vehicle speeds, accommodate bicyclists, and improve pedestrian safety and access.

## General Considerations for All Locations

*Implementation must be based upon engineering judgement and will be dependent upon the town's priorities and any human and financial resource limitations experienced by either the Town of Brunswick or MaineDOT.*

### Short Term

- Refresh crosswalk paint at least annually; use high visibility "piano key" or other highly visible style of crossings. (Review **Appendix F – MaineDOT's Striping Guidance for Municipalities** for additional guidance)
- Install double-sided pedestrian signage (high intensity yellow or yellow / lime color is recommended) on both sides of non-signalized midblock crossings to alert drivers of the presence of crosswalks.
- Regularly check signal function and timing.
- To help ensure that pedestrian safety needs throughout the municipality are identified and considered, the Town of Brunswick would continue to benefit from the input of the Brunswick Bicycle and Pedestrian Advisory Committee and the Brunswick School Department's Safe Routes to School Group, both of which are dedicated to bike / ped issues and streetscape planning.
- Develop an ongoing *BikePed Maintenance Plan* designed to support the longer-term care of pedestrian and bicycle infrastructure. This plan should incorporate the town's plans for winter maintenance of the sidewalk network as well as address long-term replacement / reconstruction strategies and the routine repair of such things as curbing, tip-downs, tactile warning devices, vegetation intrusion, etc.

- Review **Appendix B – MaineDOT’s Crosswalk Policy** and **Appendix C – MaineDOT Lane Width and Shoulder Width Engineering Instruction** to ensure that future bicycle and pedestrian improvements comply with existing MaineDOT policies and guidance.
- Implement a municipal policy which stipulates that all alterations to roadways and pedestrian ways require that the impacted facilities be made ADA compliant to the maximum extent feasible and should comply with MaineDOT’s ADA Design Guidance for pedestrian facilities found here: [mainedot.gov/civilrights/ada/](http://mainedot.gov/civilrights/ada/).
- Consider programming a leading pedestrian interval (LPI) phase at signalized intersections to reduce the number of potential conflicts between turning vehicles and crossing pedestrians. LPIs give pedestrians a chance to establish themselves in the crosswalk. They also improve driver yielding compliance because drivers see the pedestrians in the crosswalk and will wait until the pedestrian has cleared the lane into which the driver is turning.

## Medium Term

- The Town of Brunswick should follow its Complete Streets Policy to ensure transportation planning decisions in the town serve non-motorized users, as well as motorized ones. Brunswick’s Complete Streets Policy should be updated to define a reasonable cost threshold to create an exception to compliance. The Bicycle and Pedestrian Coalition of Maine encourages municipalities to include bikeped facilities when doing so accounts for no more than 20% of a project’s total cost.
- Upgrade all crossings to ensure compliance with the Americans with Disabilities Act of 1990 (ADA).
- As appropriate, narrow travel lanes on roadways with posted speed limits of 30 mph or less to improve driver speed compliance and create additional opportunities and space for other bicycle and pedestrian improvements such as buffer zones, lighting, esplanades, curb extension, medians, etc. For additional guidance, see **Appendix C – MaineDOT Lane Width and Shoulder Width Engineering Instruction**.
- Review the information provided in **Appendix E – MaineDOT Guidelines on Demonstration Projects and Non-Project Related Roadway Changes**. Consider implementing demonstration projects to determine and validate the viability and value of implementing various pedestrian safety improvements within the community.

- Consider installing Rectangular Rapid Flashing Beacons (RRFBs) or other crossing improvements such as “Advance Yield” signage and pavement markings, use of leading pedestrian intervals (LPIs), and/or pedestrian refuge islands at critical crossings.
- Review the potential pedestrian safety infrastructure improvements included within MaineDOT’s newly developed **Pedestrian Safety Toolbox** once it is released to the public. Identify opportunities within Brunswick where new treatments could be incorporated.
- Since Context Sensitive Solutions and Practical Design are important tools as we create communities that are more pedestrian friendly, MaineDOT has developed guidelines for appropriate traffic calming strategies developed to reduce vehicle speeds, the alternatives that are available, and the limits of their acceptance and use on Maine Roadways. Before embarking on any traffic calming efforts in your community, review **Appendix G – MaineDOT’s Traffic Calming Policy** and discuss the alternatives (such as bump-outs, raised crosswalks, or median islands) with your MaineDOT Region Traffic Engineer and/or MaineDOT’s Active Transportation Planner.

## Long Term

- Ensure traffic volumes and turning movements warrant channelized right turn lanes. Where warranted, ensure channelized right turn lanes are designed to draw attention to pedestrians in crosswalks.
- As part of an overall municipal parking improvement plan, implement and enforce MaineDOT’s recommended policy of a 20-foot minimum parking setback from all crosswalks.
- Improve access management conditions throughout the town by narrowing large driveway entrances. Access management helps both drivers and pedestrians anticipate where motor vehicles will enter and exit businesses, and minimizes the number of conflict points between pedestrians, bicycles, and motor vehicles. Refer to **Appendix H – Access Management Guidelines** for more information and to determine which alternatives might be appropriate in a given situation.
- In general, retrofit in-town roadways with fewer, narrower travel lanes, to slow traffic and shorten pedestrian crossings.

- Incorporate a pedestrian safety needs analysis into all projects where you also evaluate and incorporate (where appropriate) the pedestrian needs of the area surrounding the proposed project.
- Consider lane reductions of 4 lane roads to 3 lanes with a continuous 2-way left-turn lane (Road Diets) and where appropriate, add bike lanes, pedestrian space, medians, esplanades, or other pedestrian improvements to the newly freed space. Review **Appendix D – MaineDOT Road Diet Policy**, to determine if roadways might be candidates for travel lane reduction as part MaineDOT's statewide Road Diet efforts.

This report also provides specific recommendations that may improve pedestrian safety at the 5 priority locations identified at Brunswick's **Community Pedestrian Safety Forum** on April 18, 2018.

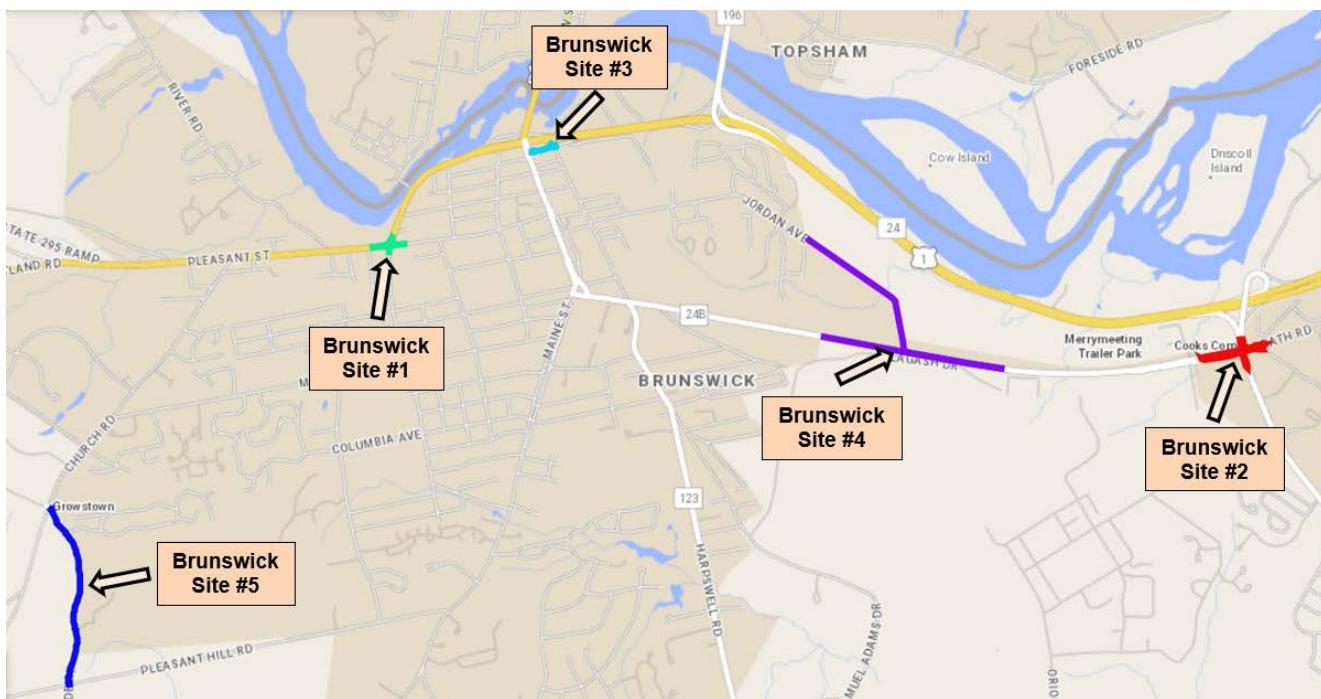


Figure 4: **Locator Map – Brunswick's Priority Locations**

Those locations are:

- 1) Intersection of Stanwood, Mill and Pleasant Streets
- 2) Cooks Corner Area
- 3) Intersection of Mason, Federal, Cressey and Water Streets

- 4) Intersection of Jordan Avenue and Bath Road
- 5) Woodside Road between Church Road and Pleasant Hill Road

Engineering recommendations were developed from information gathered during the **Pedestrian Site Safety Review** and are supplemented by recommendations referring to common and ongoing maintenance and construction efforts essential to maintain pedestrian safety.

All mitigation recommendations are based on Federal Highway Administration (FHWA) Pedestrian Safety Guide and Countermeasure Selection System at [pedbikesafe.org/PEDSAFE/](http://pedbikesafe.org/PEDSAFE/). They comply with the *Manual on Uniform Traffic Control Devices* (MUTCD), and have been reviewed by both MaineDOT and the Federal Highway Administration. Please note that photographs provided in this report are intended to represent the referenced area of concern and do not necessarily include the entire scope of the recommendations provided nor the entire area of identified and described concerns.

# Specific Engineering Recommendations

## Site #1: *Intersection of Stanwood, Mill and Pleasant Streets*



Figure 5: Site #1 - Intersection of Stanwood, Mill and Pleasant Streets

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Better define unsignalized crosswalk locations for drivers by making them a prominent roadway feature</b>	<ul style="list-style-type: none"><li>➢ Install W11-2 double-sided pedestrian signage (high intensity yellow or yellow / lime color is recommended) on both sides of unsignalized midblock pedestrian crossings to alert drivers of the presence of crosswalks</li><li>➢ Evaluate the appropriateness of utilizing flexible delineators on the white line for some crosswalks in this area</li><li>➢ Place R1-6 "Yield to Pedestrian" signs at the centerline of crosswalks</li></ul>		Short	Town of Brunswick MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Increase visibility of crosswalks</b>	<ul style="list-style-type: none"> <li>➢ Complete a field review and a safety assessment to determine appropriate ped safety alternatives (signage, locations, sight distance, Accessible Pedestrian Signal, lighting, etc.)</li> <li>➢ Ensure that crosswalks are painted at least twice annually with the first as early as possible in the spring</li> <li>➢ Upgrade all crosswalks to have high visibility crosswalk markings (such as retroreflective beads in the paint, wet reflectivity, or a reflective thermoplastic film that meet MaineDOT Minimum Standards found in <b>Appendix F</b>)</li> </ul>		Short	Town of Brunswick MaineDOT	
<b>Increase visibility of crosswalks</b>	<ul style="list-style-type: none"> <li>➢ Evaluate current overhead lighting and consider upgrading to LEDs and expanding the number of luminaires</li> <li>➢ Consider programming a leading pedestrian interval (LPI) phase at signalized intersections to reduce the number of potential conflicts between turning vehicles and crossing pedestrians</li> </ul>		Medium	Town of Brunswick MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Add locations for safe crossings of Pleasant Street and Mill Street</b>	<ul style="list-style-type: none"> <li>➢ Complete traffic safety and turning movement study of this intersection</li> <li>➢ Consider adding ADA compliant landings and a crosswalk with audible pedestrian signals across Pleasant Street at the intersection</li> <li>➢ Consider adding ADA compliant landings and a crosswalk with audible pedestrian signals across Mill Street at the intersection</li> <li>➢ Determine the safety considerations and evaluate the feasibility of installing a two-leg pedestrian crossing with a pedestrian refuge island across Pleasant Street on the western side of the intersection</li> <li>➢ Just east of the intersection, consider adding curb extension on underused northern lane of Pleasant Street</li> <li>➢ Just east of the intersection, consider adding diagonal cross hatch pavement markings on the underused northern lane of Pleasant Street</li> <li>➢ Consider adding additional pedestrian crossings at all signalized intersections on Pleasant Street from the end of the Interstate Ramp to the intersection with Mill Street</li> </ul>	Medium	Medium	Town of Brunswick  MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Add locations for safe crossings of Pleasant Street and Mill Street</b>	<ul style="list-style-type: none"> <li>➢ Evaluate the feasibility and need for a new pedestrian crossing at Westminster Avenue with the installation of a Pedestrian Hybrid Beacon (PHB)</li> </ul>		Long	Town of Brunswick  MaineDOT	
<b>Reconfigure roadway to calm traffic and improve vulnerable user access</b>	<ul style="list-style-type: none"> <li>➢ Complete a traffic analysis of Pleasant Street</li> <li>➢ Determine if turning movements and volume warrant existing lane configuration</li> <li>➢ Determine if travel lanes could be narrowed with the space being repurposed to improve safety for all roadway users</li> <li>➢ To improve the predictability of vehicle turning movements, consider reducing the size of driveway openings and keep openings as far from the intersections / signals as possible (Refer to <b>Appendix H – Access Management Guidelines</b> for more information)</li> </ul>		Long	Town of Brunswick  MaineDOT	

*Objectives\* are concepts generated through public process*

## Site #2: Cooks Corner Area



Figure 6: Site #2 - Cooks Corner Area

NOTE: This area is characterized by seven lane roads with no pedestrian access or crossings. More study and extensive redesign will be necessary to substantially improve the pedestrian level of service throughout this area.

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Create safe pedestrian access</b>	<ul style="list-style-type: none"><li>➢ Conduct a traffic and land use study of the area</li><li>➢ Create a plan for providing additional sidewalks and crossings of roadways</li></ul>		Medium	Town of Brunswick MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Explore opportunities for reconfiguring lane allocations at the intersection</b>	<ul style="list-style-type: none"> <li>➢ Complete a traffic analysis of this roadway segment</li> <li>➢ Determine if current traffic use patterns justify the dedicated slip lanes</li> <li>➢ To create additional space for other roadway safety benefits, including pedestrian access, evaluate whether the traffic volumes warrant having two through lanes and two dedicated left turning lanes on the eastern, western, and southern legs of the intersection</li> <li>➢ Utilizing the <b><i>Lane Width and Shoulder Width Engineering Guidance</i></b> provided by MaineDOT (<b>Appendix C</b>), determine if lane widths can be narrowed to slow and calm traffic</li> </ul>		Medium	Town of Brunswick  MaineDOT	
<b>Increase visibility of crosswalks</b>	<ul style="list-style-type: none"> <li>➢ Evaluate current overhead lighting and consider upgrading to LEDs and expanding the number of luminaires</li> </ul>		Medium	Town of Brunswick  MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Explore opportunities for reconfiguring lane allocations at the intersection</b>	<ul style="list-style-type: none"> <li>➢ Determine if a road diet could be implemented on Gurnet Road from the Bath Road intersection to Landing Drive with a center turn lane to create separation between modes and reallocate space for other pedestrian improvements or possibly incorporate bike lanes</li> <li>➢ Review <b>Appendix D – MaineDOT Road Diet Policy</b> for additional information</li> <li>➢ Determine if a road diet could be implemented on Bath Road from Merrymeeting Plaza to Old Bath Road to create separation between modes and reallocate space for other pedestrian improvements or possibly incorporate bike lanes.</li> <li>Additional guidance can be found in <b>Appendix D – MaineDOT Road Diet Policy</b></li> </ul>		Long	Town of Brunswick MaineDOT	

*Objectives\* are concepts generated through public process*

## **Site #3: Intersection of Cressey Road with Mason, Federal and Water Streets**



*Figure 7: Site #3 - Intersection of Cressey Road with Mason, Federal and Water Streets*

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Better define crosswalk locations for drivers by making them a prominent roadway feature</b>	<ul style="list-style-type: none"> <li>➢ Install W11-2 pedestrian signage (high intensity yellow or yellow / lime color is recommended) on both sides of the crossing on Cressey Road to alert drivers of the presence of crosswalks</li> <li>➢ Place R1-6 "Yield to Pedestrian" signs in the middle of crosswalks</li> <li>➢ Evaluate the appropriateness of utilizing flexible delineators on the white line for some crosswalks in this area to increase conspicuity</li> </ul>		Short	Town of Brunswick MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Increase visibility of crosswalks</b>	<ul style="list-style-type: none"> <li>➢ Complete a field review and a safety assessment to determine appropriate ped safety alternatives (signage, locations, sight distance, Accessible Pedestrian Signal, lighting, etc.)</li> <li>➢ Ensure that crosswalks are painted at least annually as early as possible in the spring</li> <li>➢ Upgrade all crosswalks to have high visibility crosswalk markings (such as retroreflective beads in the paint, wet reflectivity, or a reflective thermoplastic film that meet MaineDOT Minimum Standards found in <b>Appendix F</b>)</li> <li>➢ Install signage alerting drivers of the presence of crosswalks at the intersection</li> </ul>		Short	Town of Brunswick MaineDOT	
<b>Calm Through Vehicular Traffic</b>	<ul style="list-style-type: none"> <li>➢ Conduct traffic study of intersection</li> <li>➢ Review <b>MaineDOT's Traffic Calming Policy</b> in <b>Appendix G</b> to help determine which strategies might be feasible and appropriate at this location</li> <li>➢ Evaluate the appropriateness of making this a 4-way stop intersection by adding a stop sign on Mason Street at the intersection with Federal Street</li> </ul>		Medium	Town of Brunswick MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Increase visibility of crosswalks</b>	<ul style="list-style-type: none"> <li>➢ Evaluate current overhead lighting and consider upgrading to LEDs and expanding the number of luminaires</li> <li>➢ Consider clearing brush at acute corner which obscures the crossing on Water Street from Cressey Road</li> <li>➢ Consider a Rectangular Rapid Flashing Beacon for the crossing on Cressey Road</li> <li>➢ Complete a Traffic Study of the intersection and consider reconfiguring crossing on Water Street so that it is in front of stop bar</li> </ul>		Medium	Town of Brunswick  MaineDOT	
<b>Increase visibility of crosswalks</b>	<ul style="list-style-type: none"> <li>➢ Complete a Traffic Study of the intersection and consider a raised crosswalk at end of Cressey Road</li> </ul>		Long	Town of Brunswick  MaineDOT	

*Objectives\* are concepts generated through public process*

## Site #4: Intersection of Jordan Avenue and Bath Road



Figure 8: Site #4 - Intersection of Jordan Avenue and Bath Road

NOTE: This area currently has no pedestrian access or crossings. More study and extensive redesign will be necessary to improve pedestrian level of service.

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Raise awareness of bikes and peds being in this area</b>	<ul style="list-style-type: none"><li>➢ Consider installing bikeped safety signage (3-Foot Law or Motorists Share the Road) along Jordan Avenue</li><li>➢ At uncontrolled crossings, consider installing W11-2 double-sided pedestrian signage (high intensity yellow or yellow / lime color is recommended) on both sides of crossings to alert drivers of the presence of crosswalks</li></ul>		Short	Town of Brunswick MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Create safe pedestrian access</b>	<ul style="list-style-type: none"> <li>➢ Conduct a traffic and land use study of the area</li> <li>➢ Create a plan for providing sidewalks and crossings of roadways</li> <li>➢ Evaluate whether a pedestrian refuge island would be practical and feasible for pedestrian crossings in this area (Review <b>MaineDOT's Traffic Calming Policy in Appendix G</b> to help determine if this might be feasible and appropriate in this area)</li> <li>➢ Consider incorporating wayfinding signage on Bath Road and Jordan Avenue to Allagash Drive and Pine Street</li> <li>➢ Consider adding a pedestrian crossing of Bath Road with an RRFB or a Pedestrian Hybrid Beacon (PHB) signal</li> <li>➢ Consider striping Jordan Avenue with wider shoulders and no center line to provide additional space for bikes and peds</li> <li>➢ Continue discussions with MRRA (Midcoast Regional Redevelopment Authority) about improved bikeped access to Allagash Drive by creating an opening in the guard rail between Allagash Drive and Bath Road</li> </ul>	Medium		Town of Brunswick MaineDOT	

*Objectives\* are concepts generated through public process*

## **Site #5: Woodside Road between Church Road and Pleasant Hill Road**



*Figure 9: Site #5 - Woodside Road between Church Road and Pleasant Hill Road*

**NOTE:** This area has no pedestrian access or crossings. More study and extensive redesign is necessary to improve pedestrian level of service.

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Create safe pedestrian access</b>	<ul style="list-style-type: none"><li>➢ Conduct a traffic and land use study of the area</li><li>➢ Consider striping a yellow centerline to slow vehicle speeds and help vehicles maintain their lanes</li></ul>		Short	Town of Brunswick MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Create safe pedestrian access</b>	<ul style="list-style-type: none"> <li>➢ Conduct a traffic and land use study of the area</li> <li>➢ Review <b>MaineDOT's Traffic Calming Policy in Appendix G</b> to help determine which strategies might be feasible and appropriate at this location</li> <li>➢ Utilizing the <b><i>Lane Width and Shoulder Width Engineering Guidance</i></b> provided by MaineDOT (<b>Appendix C</b>), determine if lane widths can be narrowed to slow and calm traffic while providing additional space for bikes and peds</li> </ul>		Medium	Town of Brunswick MaineDOT	

*Objectives\* are concepts generated through public process*

## Education

Education is an essential component of pedestrian safety. According to *Countermeasures that Work* (2018), consistency and repetition in traffic safety educational efforts, coupled with real world practice, are critical for moving people from knowledge changes to behavioral changes, particularly with school-age populations. A need to better educate pedestrians and drivers on how to safely use Maine's roadways and traffic infrastructure has been identified as a need in all 21 Focus Communities, including Brunswick.

The most problematic pedestrian behaviors identified (by type) by Brunswick residents at the ***Safer Walking Forum*** held on May 17, 2018 were as follows:

- **Most Problematic Pedestrian Behavior:** Distracted / Inattentive Pedestrians
- **Most Problematic Motorist Behavior:** Distracted Driving

Because driver and pedestrian safety education is a statewide need, we have also provided general education recommendations to address these common needs. Specific education recommendations to address problem behaviors were suggestions from community members participating in the ***Safer Walking Forum***.

## Recommendations for all 21 Focus Communities

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Support additional walking school buses or "safety clubs" that also teach best practices to school children</b>	<ul style="list-style-type: none"> <li>➢ Request information from the Bicycle Coalition of Maine (BCM) on the Walking School Bus Program</li> <li>➢ Municipal and school leadership meet to discuss the benefits of participation</li> <li>➢ Request a BCM site visit to discuss participation in the program</li> <li>➢ Schedule an introductory Walking School Bus event at a local school</li> </ul>		Short	Town of Brunswick  Brunswick School Department  BCM	
<b>Provide Lunch and Learns to businesses, community organizations, and at public events to emphasize safe behavior</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging</li> <li>➢ Develop a presentation outline for each priority message</li> <li>➢ Identify and train potential facilitators</li> <li>➢ Send informational materials on the Lunch and Learn Program to area businesses and community groups</li> <li>➢ Contact potential groups to schedule an event</li> </ul>		Short	Town of Brunswick  BCM  MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Increase the number of local schools involved in free Safe Routes to School (SRTS) education programming offered by MaineDOT / BCM</b>	<ul style="list-style-type: none"> <li>➢ Request information from the Bicycle Coalition of Maine (BCM) on the SRTS Program</li> <li>➢ Municipal and school leadership meet to discuss the benefits of participation</li> <li>➢ Request a BCM site visit to discuss participation in the program</li> <li>➢ Schedule an introductory SRTS event at a local school</li> <li>➢ Work to institutionalize traffic safety education as part of every student's education</li> </ul>		Short	Town of Brunswick  Brunswick School Department  BCM	
<b>Consider “point of use” educational resources that would help people follow best practices for pedestrian behavior (e.g. midblock stencils reading “Use the Crosswalk!” or signs for drivers saying “Respect our Neighborhood-Slow Down” etc.)</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify which messages should be developed first, how they should be delivered, and who the target audience will be</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Build local energy and support for the program</li> </ul>		Short	Town of Brunswick  BCM  MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Create an educational campaign directed toward adults</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify which messages should be developed first, how they should be delivered, and who the target audience will be</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Build local energy and support for the program</li> </ul>		Medium	Town of Brunswick  BCM  MaineDOT	
<b>Create a local social marketing campaign using fliers, conventional media, and social media to educate the community about driving safely around vulnerable users</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify which messages should be developed first, how they should be delivered, and who the target audience will be</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Build local energy and support for the program</li> </ul>		Medium	Town of Brunswick  BCM  MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<p><b>Because 48% of all reported pedestrian crashes nationally involve drug and/or alcohol impairment of either the driver or the pedestrian, develop outreach materials and programs on the safety risks of impairment from drugs and alcohol use.</b></p>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify which messages should be developed first, how they should be delivered, and who the target audience will be</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Build local energy and support for the program</li> </ul>		Medium	<p>Town of Brunswick BCM MaineDOT</p>	
<p><b>Create a local social marketing campaign using fliers, conventional media, and social media to educate the community on strategies for biking and walking safely</b></p>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify which messages should be developed first, how they should be delivered, and who the target audience will be</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Build local energy and support for the program</li> </ul>		Medium	<p>Town of Brunswick BCM MaineDOT</p>	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Develop and coordinate a “Walk &amp; Bike Brightly” campaign</b>	<ul style="list-style-type: none"> <li>➢ Research existing Walk &amp; Bike Brightly Campaigns including their strategies and content</li> <li>➢ Meet with BCM to learn about what they are doing in other Maine communities</li> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify potential target audiences and the potential delivery methods</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Build local energy and support for the program</li> </ul>		Medium	Town of Brunswick  BCM  MaineDOT	
<b>Create a “Push the Button” campaign for the use of Rectangular Rapid Flashing Beacons</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify the target audience, how the content should be delivered, and the distribution strategy</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Build local energy and support for the program</li> </ul>		Medium	Town of Brunswick  BCM  MaineDOT	

*Objectives\* are concepts generated through public process*

## Recommendations for Distracted / Inattentive Pedestrians

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Distribute safety information along with highly reflective and actively lit materials at Lunch and Learns, community events, in schools, etc.</b>	<ul style="list-style-type: none"> <li>➢ Obtain highly reflective and actively lit pedestrian safety materials from MaineDOT and BCM</li> <li>➢ Distribute safety information and materials at community events as appropriate, such as car dealerships and other venues</li> </ul>		Short	Town of Brunswick  Brunswick School Department  BCM  MaineDOT	
<b>Develop and provide presentations and resources to teach people about the dangers of distracted walking</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content, including developing presentations / resources for a "stop, look and wave" social marketing campaign</li> <li>➢ Identify which messages should be developed first, how they should be delivered, and who the target audience will be</li> <li>➢ Identify local champions to help develop, implement, and promote the program, such as the Brunswick Bicycle &amp; Pedestrian Advisory Committee or the Brunswick Downtown Association</li> <li>➢ Build local energy and support for the program</li> </ul>		Short	Town of Brunswick  BCM  MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Get schools more involved in free SRTS education programming offered by MaineDOT / BCM</b>	<ul style="list-style-type: none"> <li>➢ Identify which K-8 Schools in the municipality are not currently participating in SRTS Programming</li> <li>➢ Request SRTS information and presentations from the Bicycle Coalition of Maine (BCM)</li> <li>➢ Work with BCM and MaineDOT to identify prioritized program areas</li> <li>➢ Share information and resources developed for the municipality during MaineDOT's Heads Up Project</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Convene a meeting between town staff and key school staff (principal, resource officer, physical education, school board, etc.) for all schools serving children in grades K-8 to discuss the benefits of participation</li> <li>➢ Invite BCM to provide a program overview and potential program activities during the meeting</li> <li>➢ Schedule an introductory SRTS event at a local school</li> <li>➢ Schedule at least one SRTS event per elementary / middle school annually</li> </ul>		Short	Town of Brunswick Brunswick School Department BCM MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Use dynamic messaging boards to remind walkers to use reflective materials, to “stop, look and wave” before crossing and remind drivers to slow down and watch out for pedestrians and other vulnerable users</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify which messages should be developed first, how they should be delivered, and who the target audience will be</li> <li>➢ Identify various high-visibility locations within the municipality where the signs can be safely located</li> <li>➢ Consider “event based” targeted messaging for local festivals such as the Brunswick’s Downtown Arts Festival, 2nd Friday ARTWALK, Summer Concert Series, holidays and when school resumes</li> </ul>		Short	Town of Brunswick BCM MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<p><b>Create a local social marketing campaign using dynamic messaging boards, fliers, conventional media, and social media to educate about pedestrians about the dangers of distracted walking, using safe crossing behaviors, being visible and motorists slowing down and watching out for other users</b></p>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify which messages should be developed first, who the target audience will be, and which social media platform(s) to use to reach this audience</li> <li>➢ Submit regular column in the <i>Times Record</i> local newspaper and provide safety messaging to Bowdoin College and local businesses.</li> <li>➢ Consider using a local mascot as a spokesperson for pedestrian safety</li> <li>➢ Explore the benefits and added value of utilizing a social media consultant</li> </ul>		Medium	<p>Town of Brunswick BCM MaineDOT</p>	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Have police officers during warning stops distribute educational materials developed by the Head's Up Pedestrian Safety Project</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify which messages should be developed first, who the target audience will be, and under what situations the materials would be distributed</li> <li>➢ Obtain highly reflective and actively lit pedestrian safety materials from MaineDOT and BCM</li> <li>➢ Distribute select information and safety materials as appropriate</li> <li>➢ Build local energy and support for the program</li> </ul>		Medium	Town of Brunswick BCM MaineDOT	
<b>Provide ongoing education on the dangers of distracted walking</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify potential target audiences and the potential delivery methods</li> <li>➢ Identify which messages should be developed first and under what situations the materials would be distributed</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Build local energy and support for the program</li> </ul>		Long	Town of Brunswick BCM MaineDOT	

Objectives\* are concepts generated through public process

## Recommendations for Distracted Driving

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Teach people about the dangers of distracted driving at Lunch and Learns, community events, in schools, etc.</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging</li> <li>➢ Develop a presentation outline for each priority message</li> <li>➢ Identify and train potential facilitators</li> <li>➢ Send informational materials on the Lunch and Learn Program to area businesses and community groups</li> <li>➢ Contact potential groups to schedule an event</li> </ul>		Short	Town of Brunswick  Brunswick School Department  BCM  MaineDOT	
<b>Use dynamic messaging boards to remind drivers to put down their phones, slow down, and watch out for pedestrians and other vulnerable users</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify which messages should be developed first, how they should be delivered, and who the target audience will be</li> <li>➢ Identify various high-visibility locations within the municipality where the signs can be safely located</li> <li>➢ Consider “event based” targeted messaging such as for holidays and when school resumes</li> </ul>		Short	Town of Brunswick  BCM  MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Create a local social marketing campaign using dynamic messaging boards, fliers, conventional media, and social media on the dangers of distracted driving</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify which messages should be developed first, how they should be delivered, and who the target audience will be</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Build local energy and support for the program</li> </ul>		Medium	Town of Brunswick  BCM  MaineDOT	
<b>Create a “Brunswick Waves” campaign encouraging peds and drivers to acknowledge seeing each other with a wave before crossing</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify potential target audiences and the potential delivery methods</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Build local energy and support for the program</li> </ul>		Medium	Town of Brunswick  BCM  MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Create a “Phones Down - Heads Up” campaign to encourage people not to use phones while driving or walking</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify potential target audiences and the potential delivery methods</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Build local energy and support for the program</li> </ul>		Medium	Town of Brunswick  BCM  MaineDOT	
<b>Provide ongoing education around distracted driving via road signs, ongoing educational campaigns at schools and worksites, etc.</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify potential target audiences and the potential delivery methods</li> <li>➢ Identify which messages should be developed first and under what situations the materials would be distributed</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Build local energy and support for the program</li> </ul>		Long	Town of Brunswick  Brunswick School Department  BCM  MaineDOT	

*Objectives\* are concepts generated through public process*

# Encouragement

The PL Jacobsen study published in the *Journal of Injury and Prevention* in 2003 concludes that where there are more people walking or bicycling, there are fewer crashes. This study, sometimes referred to as the "Safety in Numbers" study, suggests that encouragement activities to get more people walking (and biking) are important to promoting overall community safety, because the more people who are walking, the safer conditions become.

Encouragement activities can take many forms, and may include not only programmatic efforts (e.g. Walking School Buses), but also activities in the realms of policy and the built environment. Indeed they must go together - efforts to encourage people to walk in a built environment that is not supportive of pedestrian mobility are unlikely to change behavior.

## Recommendations for all 21 Focus Communities

Objectives	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Sponsor Walk to School and Walk to Work Days</b>	<ul style="list-style-type: none"><li>➢ Request <i>Walk to School / Walk to Work</i> information from the Bicycle Coalition of Maine (BCM)</li><li>➢ Identify local champions to help develop, implement, and promote the program</li><li>➢ Share information and resources developed for the municipality during MaineDOT's Heads Up Project</li><li>➢ Convene a meeting of municipal staff and local champions to plan, schedule and deliver the event</li><li>➢ Schedule at least one event annually</li></ul>		Short	Town of Brunswick  Brunswick School Department	

Objectives	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Get local schools more involved with MaineDOT's / BCM's free Safe Routes to School Program and its encouragement activities</b>	<ul style="list-style-type: none"> <li>➢ Identify which K-8 Schools in the municipality are not currently participating in SRTS Programming</li> <li>➢ Request SRTS information from the Bicycle Coalition of Maine (BCM)</li> <li>➢ Work with BCM and MaineDOT to identify prioritized program areas</li> <li>➢ Share information and resources developed for the municipality during MaineDOT's Heads Up Project</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Convene a meeting between town staff and key school staff (principal, resource officer, physical education, school board, etc.) for all schools serving children in grades K-8 to discuss the benefits of participation</li> <li>➢ Invite BCM to provide a program overview and potential program activities during the meeting</li> <li>➢ Schedule an introductory SRTS event at a local school</li> <li>➢ Schedule at least one SRTS event per elementary / middle school annually</li> </ul>		Short	Town of Brunswick BCM MaineDOT	

Objectives	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>To engage businesses, develop an outreach campaign with presentations and resources celebrating the benefits of more foot and bike traffic</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify potential target audiences and the potential delivery methods</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Build local energy and support for the program</li> <li>➢ Deliver the program</li> </ul>		Short	Town of Brunswick BCM MaineDOT	
<b>Sponsor “People in the Streets” events where a local street is open only to pedestrians</b>	<ul style="list-style-type: none"> <li>➢ Request <i>People in the Streets</i> event information from the Bicycle Coalition of Maine (BCM)</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Share information and resources developed for the municipality during MaineDOT’s Heads Up Project</li> <li>➢ Convene a meeting of municipal staff and local champions to plan, schedule and deliver the event</li> <li>➢ Schedule at least one event annually</li> </ul>		Medium	Town of Brunswick BCM	

Objectives	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Create streetscapes that are more attractive and supportive of pedestrian use</b>	<ul style="list-style-type: none"> <li>➢ Budget for a streetscape improvement planning project</li> <li>➢ Work with MaineDOT and BCM to identify potential locations and strategies to improve local streetscapes</li> <li>➢ Hire a consultant to develop streetscape improvement plan</li> <li>➢ Budget for the implementation of the recommendations developed during the streetscape improvement planning project</li> <li>➢ Implement at least one of the recommendations developed during the streetscape improvement planning process.</li> </ul>		Long	Town of Brunswick BCM MaineDOT	

*Objectives\* are concepts generated through public process*

# Enforcement

More enforcement of the laws governing the legal use of roads on the part of pedestrians and drivers was identified as a need in all 21 Focus Communities, including Brunswick.

According to the 2014 National Highway Transportation Safety Administration (NHTSA) publication *Pedestrian Safety Enforcement Operations: A How To Guide*, "Enforcement of pedestrian safety laws has typically been minimal, even though compliance with these laws is low." Increased enforcement activity may improve the behavior of both drivers and pedestrians.

Enforcement recommendations address common enforcement opportunities in all communities. Specific enforcement recommendations are community suggestions that address problem behaviors identified at the ***Safer Walking Forum***.

The most problematic behaviors for pedestrians identified (by type) by Brunswick residents at the ***Safer Walking Forum*** held on May 17, 2018 were as follows:

- **Most Problematic Pedestrian Behavior:** Distracted / Inattentive Pedestrians
- **Most Problematic Motorist Behavior:** Distracted Driving

## Recommendations for all 21 Focus Communities

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Utilize Maine Bureau of Highway Safety (BHS) grant funding to enhance enforcement of distracted driving laws in support of vulnerable user safety</b>	<ul style="list-style-type: none"> <li>➢ Fully define the Distracted Driving problem within the local community and develop a local intervention strategy to address the issues</li> <li>➢ Refine and clarify the program's goals and objectives</li> <li>➢ Develop an implementation timeline</li> <li>➢ Determine the municipality's strategy for evaluating the effectiveness of this intervention strategy</li> <li>➢ Develop a budget for strategy implementation</li> <li>➢ Apply annually for BHS Distracted Driving Grant Funding</li> <li>➢ Update information as needed, but at least annually</li> </ul>		Short	Town of Brunswick BCM Maine Bureau of Highway Safety	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Utilize Maine Bureau of Highway Safety grant funding to enhance enforcement of pedestrian crossing laws</b>	<ul style="list-style-type: none"> <li>➢ Identify the problems / challenges and define why pedestrian crossing laws need additional enforcement within the local community</li> <li>➢ Develop a local intervention strategy to address the issues</li> <li>➢ Refine and clarify the program's goals and objectives</li> <li>➢ Develop an implementation timeline</li> <li>➢ Determine the municipality's strategy for evaluating the effectiveness of this intervention strategy</li> <li>➢ Develop a budget for strategy implementation</li> <li>➢ Apply annually for BHS Pedestrian Safety Grant Funding</li> <li>➢ Update information as needed, but at least annually</li> </ul>		Short	Town of Brunswick  BCM  Maine Bureau of Highway Safety	
<b>Continue to investigate all reports of aggressive or negligent motor vehicle operation</b>	<ul style="list-style-type: none"> <li>➢ Create and promote a process for community members to report concerns on motor vehicle operation</li> <li>➢ Validate and prioritize all reports received</li> <li>➢ Investigate all reports</li> </ul>		Short	Town of Brunswick	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Utilize Maine Bureau of Highway Safety grant funding to enhance enforcement of pedestrian and bicycle laws</b>	<ul style="list-style-type: none"> <li>➢ Identify the problems / challenges and define why pedestrian and bicycle laws need additional enforcement within the local community</li> <li>➢ Develop a local intervention strategy to address the issues</li> <li>➢ Refine and clarify the program's goals and objectives</li> <li>➢ Develop an implementation timeline</li> <li>➢ Determine the municipality's strategy for evaluating the effectiveness of this intervention strategy</li> <li>➢ Develop a budget for strategy implementation</li> <li>➢ Apply annually for BHS Pedestrian Safety Grant Funding</li> <li>➢ Update information as needed, but at least annually</li> </ul>		Short	Town of Brunswick BCM Maine Bureau of Highway Safety	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Law enforcement will distribute appropriate state-wide resources developed by the Heads Up Pedestrian Safety Project</b>	<ul style="list-style-type: none"> <li>➢ Identify which resources developed by the community, MaineDOT, and/or BCM would be appropriate for law enforcement to distribute and under what circumstances</li> <li>➢ Identify if the municipality would like to implement a seasonal or thematic calendar where specific issues are highlighted at different times of the year and develop if appropriate</li> <li>➢ Develop a local policy that outlines the appropriate times and circumstances when it would be appropriate for an officer to distribute each resource item</li> <li>➢ Ensure that adequate materials and resources are printed and available to every officer</li> </ul>		Short	Town of Brunswick  BCM  MaineDOT	
<b>Use dynamic messaging boards to remind drivers to put down their phones, slow down and watch out for pedestrians and other vulnerable users</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify potential target audiences and the potential delivery methods</li> <li>➢ Identify local champions to help develop, implement, and promote the program</li> <li>➢ Build local energy and support for the program</li> </ul>		Short	Town of Brunswick  BCM  MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Develop and distribute ongoing community specific resources appropriate for distribution by law enforcement</b>	<ul style="list-style-type: none"> <li>➢ Identify which community specific resources would be appropriate for law enforcement to distribute and under what circumstances</li> <li>➢ Work with BCM and MaineDOT to identify community specific priority messaging content</li> <li>➢ Identify which messages should be developed first, how they should be delivered, and who the target audience will be</li> <li>➢ Identify if the municipality would like to implement a seasonal or thematic calendar where specific issues are highlighted at different times of the year and develop if appropriate</li> <li>➢ Develop a local policy that outlines the appropriate times and circumstances when it would be appropriate for an officer to distribute each resource item</li> <li>➢ Ensure that adequate materials and resources are printed and available to every officer</li> </ul>		Medium	Town of Brunswick BCM MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Continue to make enforcement of laws protecting vulnerable users a departmental / municipal priority</b>	<ul style="list-style-type: none"> <li>➢ Provide BCM vulnerable user in-service training to every member of the municipal police department</li> <li>➢ Encourage officers to enforce vulnerable user laws through stops, citations, and warnings</li> <li>➢ Ensure that all crashes involving pedestrians include detailed and specific crash information</li> <li>➢ Ensure that vulnerable user laws are enforced across all user groups (bicyclists, pedestrians, drivers)</li> <li>➢ Raise local awareness of the municipality's enhanced enforcement strategy through the local media, print, and social media outreach efforts</li> </ul>		Medium	Town of Brunswick BCM	

*Objectives\* are concepts generated through public process*

## Recommendations for Distracted / Inattentive Pedestrians

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Continue to Enforce Existing Pedestrian Laws</b>	<ul style="list-style-type: none"> <li>➢ Assign more officers to bike or foot patrol downtown to enable community policing and education</li> <li>➢ Conduct enforcement operations targeting pedestrians who fail to yield to vehicular traffic at unmarked locations as required by state law</li> </ul>		Short	Town of Brunswick	
<b>Improve Pedestrian Visibility--Have police officers provide reflective materials provided by the Heads Up Pedestrian Safety Project to persons walking after dark</b>	<ul style="list-style-type: none"> <li>➢ Identify which resources (reflective strips or slap-bands) would be appropriate for law enforcement to distribute and under what circumstances</li> <li>➢ Develop a local policy that outlines the appropriate times and circumstances when it would be appropriate for an officer to distribute each resource item</li> <li>➢ Request highly-reflective materials from MaineDOT</li> <li>➢ Ensure that adequate materials and resources are available to every officer</li> </ul>		Short	Town of Brunswick BCM MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Encourage Use of Safe Crossing Locations</b>	<ul style="list-style-type: none"> <li>➢ Identify locations of particular danger due to sight lines and speed and work to discourage crossing at such sites</li> <li>➢ Conduct enforcement operations against drivers who fail to yield at marked crosswalks to build confidence in the relative safety of marked locations</li> <li>➢ Consider studying high volume unmarked crossing locations for possible marked crosswalk installation</li> </ul>		Medium	Town of Brunswick  BCM  MaineDOT	
<b>Have police officers continue to provide community education sessions at schools and worksites on pedestrian safety, emphasizing the dangers of inattentive or distracted walking</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging</li> <li>➢ Develop a presentation outline for each priority message</li> <li>➢ Identify and train officers to be potential facilitators</li> <li>➢ Send informational materials on the program to area businesses, schools, and community groups</li> <li>➢ Contact potential groups to schedule an event</li> </ul>		Medium	Town of Brunswick  BCM  MaineDOT	

Objectives\* are concepts generated through public process

## Recommendations for Distracted Driving

Objectives	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Track all warnings and citations issued during traffic stops to identify chronic offenders</b>	<ul style="list-style-type: none"> <li>➢ Develop a local policy guiding the process for collecting and tracking all warnings and citations for distracted driving</li> <li>➢ Determine the local threshold for determining when a driver is classified as a "chronic offender" and what local actions will be taken</li> <li>➢ Raise local awareness of the municipality's enhanced enforcement strategy through the local media, print, and social media outreach efforts</li> </ul>		Short	Town of Brunswick BCM	
<b>Use dynamic messaging boards to remind drivers to put down their phones, slow down, and watch out for pedestrians and other vulnerable users</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to identify priority messaging content</li> <li>➢ Identify which messages should be developed first, how they should be delivered, and who the target audience will be</li> <li>➢ Identify various high-visibility locations within the municipality where the signs can be safely located</li> <li>➢ Consider "event based" targeted messaging such as for holidays and when school resumes</li> </ul>		Medium	Town of Brunswick BCM MaineDOT	

Objectives	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Conduct high visibility enforcement operations for drivers using devices</b>	<ul style="list-style-type: none"> <li>➢ Fully define the Distracted Driving problem within the local community and develop a local intervention strategy to address the issues</li> <li>➢ Develop a local policy guiding high visibility enforcement operations on distracted driving</li> <li>➢ Refine and clarify the program's goals, objectives and metrics</li> <li>➢ Develop an implementation strategy and timeline</li> <li>➢ Determine the municipality's strategy for evaluating the effectiveness of this intervention strategy</li> <li>➢ Develop a budget for strategy implementation</li> <li>➢ Apply annually for BHS Vulnerable User Safety Enforcement grants, as available</li> <li>➢ Update information as needed, but at least annually</li> <li>➢ Raise local awareness of the municipality's enhanced enforcement strategy through the local media, print, and social media outreach efforts</li> </ul>		Medium	Town of Brunswick BCM	

*Objectives\* are concepts generated through public process*

# Evaluation

Evaluation of the impact of the mitigation recommendations above can be measured most tangibly in reductions in the frequency and severity of pedestrian crashes.

## Recommendations for all 21 Focus Communities

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Count the number of short-term measures implemented</b>	<ul style="list-style-type: none"><li>➢ The municipality will have partially met standard expectation by implementing (within 1 year of receiving this report) at least 1 short-term measure in at least half of all sections</li><li>➢ The municipality will have met the minimum standard expectation by implementing (within 1 year of receiving this report) at least 1 short-term measure per section</li><li>➢ The municipality will have exceeded the standard expectation by implementing (within 1 year of receiving this report) at least 2 short-term measures per section</li></ul>		Short	Town of Brunswick BCM MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Track the frequency, severity, and causal factors of pedestrian crashes town wide</b>	<ul style="list-style-type: none"> <li>➢ Annually utilize existing pedestrian crash data (MaineDOT and local) to identify locations, frequency, severity, and causal factors of all pedestrian crashes for the previous 5 years (such as 2015-2020)</li> <li>➢ Track the number, severity, and causal factors of all pedestrian crashes within the municipality</li> <li>➢ Annually compare and evaluate all pedestrian crashes within the community with those experienced during the current 5-year period such as 2015-2020</li> <li>➢ Evaluate the frequency, severity and causal factors of pedestrian crashes at all locations prioritized by the community during the <b>Heads Up Pedestrian Safety Forum</b></li> <li>➢ Evaluate the frequency, severity and causal factors of pedestrian crashes at all locations with more than one pedestrian crash after January 1, 2018</li> <li>➢ Request MaineDOT and the Bicycle Coalition of Maine complete an updated Site Safety Review of all locations with multiple pedestrian crashes or recurrent causal factors</li> </ul>		Short	Town of Brunswick BCM MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Regularly administer Pedestrian Safety Surveys to community members to track safety knowledge and behaviors over time</b>	<ul style="list-style-type: none"> <li>➢ Work with BCM and MaineDOT to create an appropriate Pedestrian Safety Survey Instrument that will remain valid over time</li> <li>➢ Determine desired survey delivery method, sample population, and survey frequency</li> <li>➢ Administer survey</li> <li>➢ Track responses and changes over time</li> <li>➢ Based on survey results, determine what additional efforts may be needed</li> </ul>		Short	Town of Brunswick  BCM  MaineDOT	
<b>Count number of medium-term measures implemented</b>	<ul style="list-style-type: none"> <li>➢ The municipality will have partially met standard expectation by implementing (within 5 years of receiving this report) at least 1 medium-term measure in at least half of all sections</li> <li>➢ The municipality will have met the minimum standard expectation by implementing (within 5 years of receiving this report) at least 1 medium-term measure per section</li> <li>➢ The municipality will have exceeded the standard expectation by implementing (within 5 years of receiving this report) at least 2 medium-term measures per section</li> </ul>		Medium	Town of Brunswick  BCM  MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Trend line reduction for the frequency and severity of pedestrian crashes town wide and at the locations prioritized by the community</b>	<ul style="list-style-type: none"> <li>➢ Utilize existing pedestrian crash data (MaineDOT and local) to identify locations, frequency, severity, and causal factors of all pedestrian crashes for the previous 5 years (such as 2015-2020)</li> <li>➢ Track the number, severity, and causal factors of all pedestrian crashes within the municipality</li> <li>➢ Annually compare and evaluate all pedestrian crashes within the community with those experienced during the 2015-2020 5-year period</li> <li>➢ Evaluate the frequency, severity and causal factors of pedestrian crashes at all locations prioritized by the community during the <b>Heads Up Pedestrian Safety Forum</b></li> <li>➢ Determine annually the community's 5-year trend line for all pedestrian crashes and for those at the locations prioritized by the community</li> </ul>		Medium	Town of Brunswick  BCM  MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Trend line reduction for the frequency and severity of pedestrian crashes town wide and at the locations prioritized by the community</b>	<ul style="list-style-type: none"> <li>➢ Utilize existing pedestrian crash data (MaineDOT and local) to identify locations, frequency, severity, and causal factors of all pedestrian crashes for the previous 5 years (such as 2015-2020)</li> <li>➢ Track the number, severity, and causal factors of all pedestrian crashes within the municipality</li> <li>➢ Annually compare and evaluate all pedestrian crashes within the community with those experienced during the 2015-2020 5-year period</li> <li>➢ Evaluate the frequency, severity and causal factors of pedestrian crashes at all locations prioritized by the community during the <b>Heads Up Pedestrian Safety Forum</b></li> <li>➢ Determine annually the community's 10-year trend line for all pedestrian crashes and for those at the locations prioritized by the community</li> </ul>		Long	Town of Brunswick BCM MaineDOT	

Objectives*	Potential Actions	Priority	Time Frame	Responsible Party	Current Status
<b>Count number of long-term measures implemented</b>	<ul style="list-style-type: none"> <li>➢ The municipality will have partially met standard expectation by implementing (within 10 years of receiving this report) at least 1 long-term measure in at least half of all sections</li> <li>➢ The municipality will have met the minimum standard expectation by implementing (within 10 years of receiving this report) at least 1 long-term measure per section</li> <li>➢ The municipality will have exceeded the standard expectation by implementing (within 10 years of receiving this report) at least 2 long-term measures per section</li> </ul>		Long	Town of Brunswick BCM MaineDOT	

Objectives\* are concepts generated through public process

## Works Cited

Richard, C. M., Magee, K., Bacon-Abdelmoteeb, P., & Brown, J. L. (2018, April). *Countermeasures that work: A highway safety countermeasure guide for State Highway Safety Offices*, Ninth edition (Report No. DOT HS 812 478). Washington, DC: National Highway Traffic Safety Administration.

PL Jacobsen. "Safety in Numbers: More Walkers and Bicyclists, Safer Walking and Bicycling." *Journal of Injury Prevention* 2003;9:205–209.

NHTSA. *Pedestrian Safety Enforcement Operations: A How To Guide* (DOT HS 812 059 November 2014).