



## DRAFT Millinocket Crosswalk Calming and Visibility Treatments

7.30.2021

### Summary

In response to reports of speeding traffic and poor yield behavior on the part of drivers on Central Street, the Thrive Penobscot/BCM Team proposes to install vertical elements to enhance the visibility of crossings, slow motorist traffic and improve yield rates at up to six locations along Central Street. See Figure 1

*Figure 1. Yellow circles indicate locations targeted for treatment. See Figures 3-9 for specific location layouts*



The installations will seek to slow motorist traffic to the posted speed limit; speed studies will be conducted before and with the installation in place. Yield rates will also be studied at two locations.



The project is temporary and will be installed sometime in the summer early fall of 2021; timeframes are still being set. Materials and installation labor are at no charge to the City.

### **Purpose**

To test whether low cost visibility enhancements at crosswalks and gateway treatments can enhance pedestrian safety by lowering maximum and average traffic speeds on Central Street to comply with posted limits, and to study whether these changes impact yield rates.

### **Need**

Anecdotal reports are that drivers speed on Central Street and do not readily yield. The current street geometry does not call attention to the presence of crossings or help calm traffic.

### **Installation and Removal**

The basic enhancements will consist of gateway treatments using white delineators along the crosswalk between the parking stripe and the the curb, as well as R1-6 Yield signs or yellow delineators or yellow raised pavement markings positioned where the centerline striping meets the crosswalk. See Figure 2. A freestanding gateway will be installed at the approach to downtown Millinocket at the point where the posted speed transitions to 25mph. See Figure 3. The delineators used shall have retro-reflective tape on them for visibility during nighttime hours. The landings of the crosswalks within the delineators may be painted a muted contrasting color (eg. dark red).

*Figure 2: Representative crosswalk gateway treatment with R1-6 yield sign*



*Figure 3--Typical Freestanding Roadway Gateway for traffic calming*





Nominal travel lane widths shall remain at 11 feet or more. Lanes smaller than 11 feet shall not be reduced further.

If used, R1-6 signs will only be used at crosswalks, never in advance of them. R1-6 signs will be placed on the centerline in accordance with MUTCD guidance.

Installations at intersections will generally be based on extensions of the parking lane stripes and will tighten radii of corners to slow vehicles and keep them minimum distances from curb lines as they turn into locations where crosswalks are present. The spatial needs of turning vehicles will be considered, and templated as needed.

The tubular delineators should have no or minimal impact on parking, and considering possible impacts will be a priority for the team. Delineators placed near crosswalks will have two aligned with the parking stripe and two placed approx. 10-15 ft from the edge of the crosswalk in the midpoint of the parking lane to help facilitate compliance with MaineDOT rule regarding no parking within 20 feet of marked crosswalks. Additional painted cross hatching will also mark areas of no parking within 20 feet of marked crosswalks.

Delineator placement will also take into consideration turning movements onto adjacent streets and into curb cuts, and will be placed so as to minimize impacts.

The proposed treatments have been studied recently in Michigan and proven effective. Reference studies include:

<https://traffic.transportation.org/wp-content/uploads/sites/26/2017/07/Gateway-Treatment-for-Pedestrian-Crossings-Bott.pdf>  
<https://conservancy.umn.edu/bitstream/handle/11299/189957/CTS%2017-05.pdf?sequence=1&isAllowed=y>

This project is intended to be seasonal. Delineators will be removed no later than mid-November using a shovel to disengage the butyl adhesive; removal may be earlier if plowable snow is expected. Residual adhesive will be removed as much as possible.

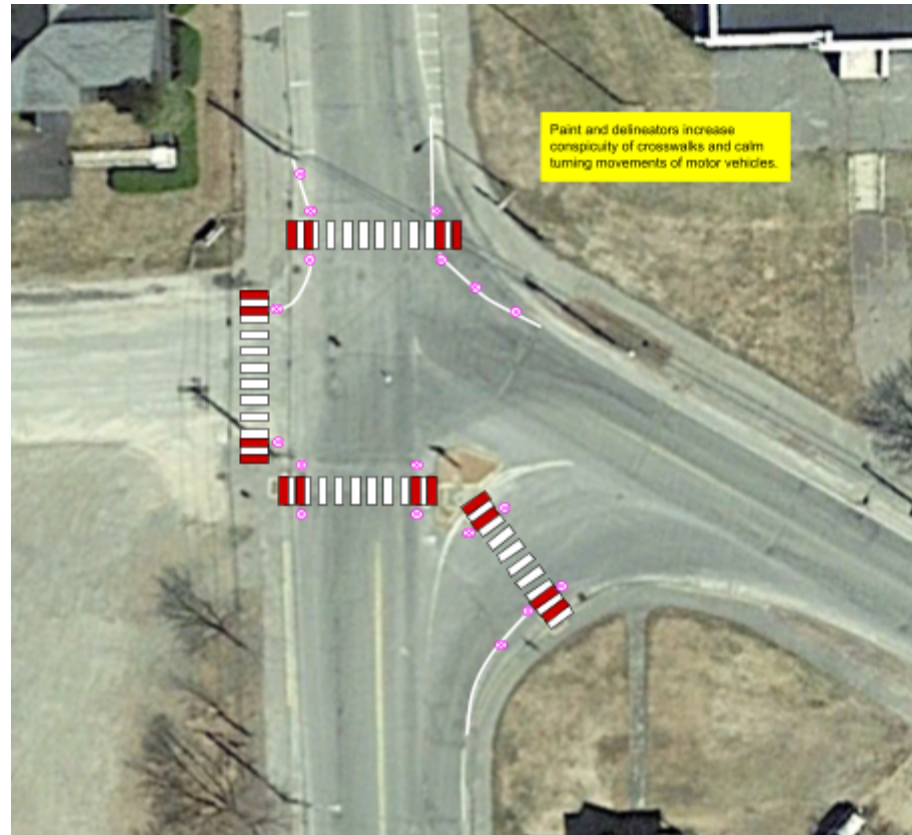
The City of Millinocket commits to reinstalling this project in the spring of 2022.



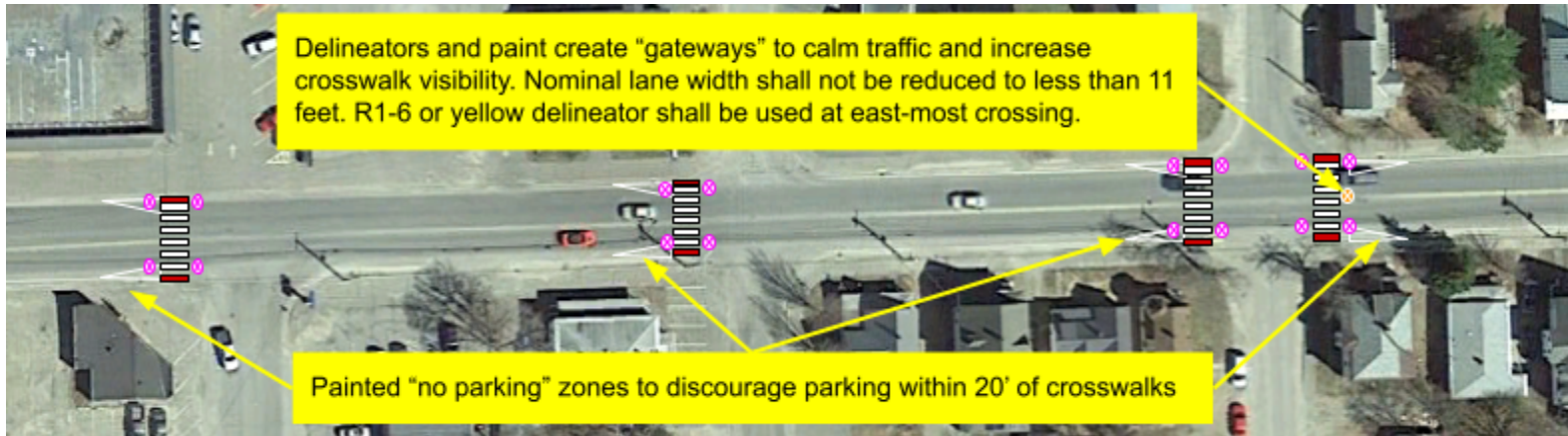


Proposed Specific Layouts (NORTH is up in all images; layouts subject to revision on installation)

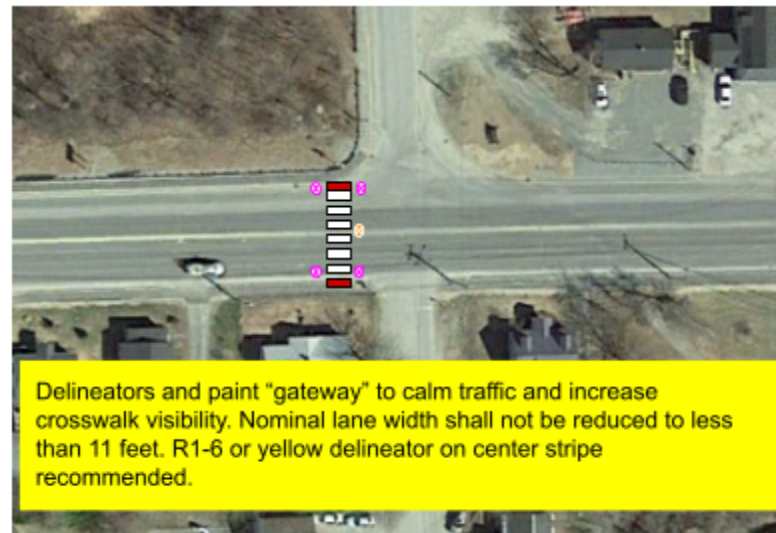
*Figure 4: Katahdin Ave. and Central Street*



*Figure 5: Aroostook, Congress and State Street crossings on Central Street*



*Figure 6: Gateway treatment at crossing at Forest Street*



*Figure 7 : Gateway treatment at transition to 25mph zone*



### **Traffic Safety During Installation and Removal**

This project will only have minimal needs for the project team members to actually be in the travel lane exposed to traffic. The project team will use OSHA approved "Road Work" signs in advance of the project area, and cones near any area where people are working. MUTCD guidance for work areas will be followed. At least one person will be tasked with simply monitoring traffic and helping to keep project installers safe. All persons on site during installation and removal will wear high vis vests. A DPW truck or



police cruiser is requested to be on hand during installation. There will be no impact on vehicular traffic at the sites during installation or removal.

### **Timeframe**

The installations would be installed Summer/early fall 2021 and removed by November, 2021. The City of Millinocket commits to reinstalling this project in the spring of 2022.

### **Metrics**

The effectiveness of the installation will be measured by assessing whether the installation slowed vehicle traffic or changed yield rates from baseline studies. Studies will be conducted before and during the installation. A survey to collect public reaction will also be created and shared.

### **Maintenance Plan**

The project will be monitored on a daily basis by members of the project team, and any knocked down delineators will be replaced by project team members or municipal DPW, if they are willing, within 48 hours of a report.

### **Public Notification**

Good public notification will help ensure that people understand the need and intent for this project. BCM will issue a press release, contact members in Millinocket about the project, and make social media posts about the project. A one-pager describing the project will be created for public distribution. BCM recommends that the municipality take proactive measures to ensure that residents and abutters are informed of the project's intent and timeframe using official communications methods. Additional measures to inform the public will be implemented as needed and requested by the city. These may include public forums, physical letters, articles in local papers, etc. A survey is planned to assess public reaction to the project. A contact person within the municipality shall be designated to receive comments.





### **Authorization Process**

The project will not move forward without city and MaineDOT review and approval. An authorized representative of the City of Millinocket will sign an MOU acknowledging that the demonstration project is a planning exercise of the City and that the City bears all responsibility for the project. The Regional Engineer for the MaineDOT shall provide written confirmation that he/she has reviewed the project plan and has no objections to its moving forward.

### **Cost**

Delineators, adhesive and paint are \$350/crosswalk.. With six separate locations identified for treatment in the current draft, plus two R1-6 signs, plus \$200 for incidentals and contingencies, materials are estimated at \$2800 for this project.

### **Purchase of Materials**

TBD

### **Liability**

This project shall be understood as a planning exercise of the City of Millinocket with the full permission and approval of the city government. The City of Millinocket shall hold harmless and indemnify the Bicycle Coalition of Maine and its respective officers, directors, employees and agents from and against any claim, loss, damages, theft and liability pertaining to bodily injury, property damage, personal injury, death, or any other type of claim, arising out of or occurring in connection with demonstration project here described. An MOU agreeing to these terms must be signed prior to installation.



### Memorandum of Understanding


The project described above is executed as a planning exercise of the City of Millinocket with the full permission and approval of the City of Millinocket. This project has also been reviewed by the MaineDOT and has been approved for implementation.

The City of Millinocket commits to reinstalling this project in the spring of 2022.

The City of Millinocket shall hold harmless and waive any claims against the Bicycle Coalition of Maine, their respective officers, directors, employees and agents from and against any claim, loss, damages, theft and liability pertaining to bodily injury, property damage, personal injury, death, or any other type of claim, arising out of or occurring in connection with the demonstration project herein described.

### Confirmation

This document confirms and acknowledges that the MaineDOT (if needed) and municipal authorities in the City of Millinocket, Maine approve of and authorize the demonstration project described above and agree to the terms in this memorandum.

Authorized Millinocket Municipal Official (Mayor, Town Manager, DPW Director, or equivalent):	Bicycle Coalition of Maine Staff:	Authorized MaineDOT Official
_____ print name	_____ James C. Tassé _____ print name	_____ print name
_____ sign name	 _____ sign name	_____ sign name
_____ Title	_____ Assistant Director _____ Title	_____ Title
_____ Date	_____ 7.30.21 _____ Date	_____ Date



**BICYCLE  
COALITION  
OF MAINE**