AASHTO
AASHTO INNOVATION INITIATIVE

AASHTO Innovation Initiative

[Proposed] Nomination of Innovation Ready for Implementation

Sponsor

Nominations must be submitted by an AASHTO member DOT willing to help promote the innovation. If selected, the sponsoring DOT will be asked to promote the innovation to other states by participating on a Lead States Team supported by the AASHTO Innovation Initiative.

1. Sponsoring DOT (State): Minnesota Department of Transportation

2. Name and Title: Amber Dallman, Transit and Active Transportation Planning Supervisor

Organization: Minnesota Department of Transportation

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Innovation Description (10 points)

The term “innovation” may include processes, products, techniques, procedures, and practices.

3. Name of the innovation:

Engaging Communities and Improving Pedestrian and Bicycle Safety with Demonstration Projects

4. Please describe the innovation.

MnDOT had communities and advocates wanting to implement tactical urbanism on streets, and there were safety concerns with the materials they wanted to use. MnDOT convened engineers, planners and

partners to discuss what materials could be used in a temporary project and documented the process for how to do a demonstration project. MnDOT worked closely with partners to establish *Demonstration Project Implementation Guide (http://www.dot.state.mn.us/saferoutes/demonstration-projects.html)* to build support for active transportation improvements in upcoming projects. Demonstration projects are short term, low cost, temporary roadway projects to promote and advance walking and bicycling. Many projects can be demonstration projects, such as crosswalk markings, curb extensions, and median safety islands. Long term changes use more durable materials, such as new concrete curb. In the short term, demonstration projects use low cost and easily available materials to quickly enhance a street and/or intersection. MnDOT is installing demonstration projects across Minnesota to gather input on safety improvements for upcoming trunk highway projects. Additionally, MnDOT's Safe Routes to School program funds local demonstration projects to implement proven safety countermeasures.

5. What is the existing baseline practice that the innovation intends to replace/improve?

Communities were looking at implementing project that were not MUTCD compliant, which discouraged local engineers and partners from getting involved or seeing the project to change a roadway. Prior to the development of the *Demonstration Project Implementation Guide* communities and local partners were asking to explore and implement temporary improvements for active transportation. Transportation practitioners were interested in trying active transportation improvements and wanted guidance on how to implement, including acceptable materials to be used following Minnesota's Manual on Uniform Traffic Control Devices. Providing guidance on the process and materials to be used help a range of partners and stakeholders to see demonstration projects to engage communities and gather input on roadway changes and improvements for walking and bicycling.

6. What problems associated with the baseline practice does the innovation propose to solve?

Prior to the demonstration project guide, partners were less likely to be engaging effectively with roadway authority on how to install a temporary project with improvements to walking and biking. Communities have been asking for walking and biking improvements, and the demonstration project guidance provided a process to test long-term designs that align with existing design guidance and proven safety countermeasures. Furthermore, demonstration projects are way for MnDOT and partners to address ongoing concerns with pedestrian fatalities and serious injuries in Minnesota. Through community engagement efforts for MnDOT's Statewide Pedestrian System Plan, nearly three out of four people responding, "completely support improvements for walking," and over 85% highly support the installation of a demonstration project in their community. Additionally, goals of the plan include to 1) promote walking as a universal need; 2) create healthy and equitable communities; 3) create safer places to walk; 4) create enjoyable places to walk; and 5) build internal capacity to advance walking. Regular demonstration projects support implementation of the goals in the pedestrian system plan.

Demonstration projects allow MnDOT and partners to advance and implement goals in the pedestrian plan as well as respond to community needs.

7. Briefly describe the history of its development.

Minnesota has a robust Safe Routes to School (SRTS) program with a range of engaged partners and stakeholders. MnDOT convenes and facilitates a SRTS Steering Committee that provides input on program priorities and emerging needs. Steering committee members shared that communities were interested in installing temporary projects to test out potential safety improvements and were running into limitation with roadway authorities on what traffic control devices can and cannot be used on Minnesota roads. MnDOT staff convened a range of internal and external partners to develop a guide for communities on identifying potential places for safety improvements, selecting appropriate safety countermeasures, engaging communities, and evaluating results to determine future changes to implement. The SRTS program then funded school-related demonstration projects for places seeking to try active transportation improvements that could support upcoming construction projects. At the same time, MnDOT was in the process of creating at Statewide Pedestrian System Plan. One aspect of community engagement in plan development was working the district / regional staff on upcoming projects that would benefit from active transportation improvements. In 2020, MnDOT staff installed eight demonstration projects. The projects effectively engaged communities, and additional projects were identified in 2021.

8. What resources—such as technical specifications, training materials, and user guides—have you developed to assist with the deployment effort? If appropriate, please attach or provide weblinks to reports, videos, photographs, diagrams, or other images illustrating the appearance or functionality of the innovation (if electronic, please provide a separate file). Please list your attachments or weblinks here.

MnDOT and partner developed a *Demonstration Project Implementation Guide* (http://www.dot.state.mn.us/saferoutes/demonstration-projects.html). Demonstration projects for MnDOT's Statewide Pedestrian System Plan can be found at https://www.minnesotawalks.org/demonstration-projects/. Demonstration Project Community Engagement Toolkit: attached to application; Time lapse video of Warren, MN demonstration project: attached to application
Warren Safe Routes to School Demonstration Video: https://youtu.be/t4r_ZJ4jpNw

Attach photographs, diagrams, or other images here. If images are of larger resolution size, please provide as separate files.

State of Development (40 points)

Innovations must be successfully deployed in at least one State DOT. The AII selection process will favor innovations that have advanced beyond the research stage, at least to the pilot deployment stage, and preferably into routine use.

9. How ready is this innovation for implementation in an operational environment? Please select from the following options. Please describe.

☐ Prototype is fully functional and yet to be piloted

☒ Prototype has been piloted successfully in an operational environment

☒ Technology has been deployed multiple times in an operational environment

☐ Technology is ready for full-scale implementation

MnDOT staff and local partners have used and installed demonstration projects using the guidance developed in 2019.

10. What additional development is necessary to enable implementation of the innovation for routine use?

Click or tap here to enter text.

11. Are other organizations using, currently developing, or have they shown interest in this innovation or of similar technology?? ☐ **Yes**

If so, please list organization names and contacts. Please identify the source of this information.

Organization	Name	Phone	Email
Fond du Lac Band of Lake Superior Chippewa, Fond du Lac Ojibwe School	Megan Smith	218-878-2631	jamieadams@fdlrez.com
Gideon Pond Elementary School, Burnsville, MN	Shannon Wohlman	218-340-4896	ptogiedeonpond@gmail.com
City of La Crescent	Bill Waller	507-895-4668	bwaller@cityoflacrescent-mn.gov
Ashby Schools, Ashby, MN	Jonathon Moore	218-747-2257	jmoore@ashbyps.org

City of Warren, MN	Shannon Mortenson	218-745-5343	shannonm@warrenminnesota.com
Fridely Middle School	Julie Jones	763-572-3599	Julie.jones@fridelymn.gov
City of Kasson	Jenny Carrier	507-634-44964	j.carrier@komets.k12.mn.us

Potential Payoff (30 points)

Payoff is defined as the combination of broad applicability and significant benefit or advantage over baseline practice.

12. How does the innovation meet customer or stakeholder needs in your State DOT or other organizations that have used it?

Demonstration projects are a direct response to feedback from community stakeholders seeking to try safety improvements before investing in longer-term changes. Demonstration projects provide a tangible way for people to provide input and get ideas for how space can be used in their communities and make it easier to create active transportation networks. These projects are an effective way for transportation practitioners to get subjective and objective feedback on potential active transportation countermeasure implementation to help support project decisions.

13. Identify the top three benefit types your DOT has realized from using this innovation. Describe the type and scale of benefits of using this innovation over baseline practice. Provide additional information, if available, using quantitative metrics, to describe the benefits.

Benefit Types	Please describe:
Test safety improvements and collect data	Demonstration projects allow communities to test aspects of safety improvements before making further investments. These projects can help assess if changes will affect vehicular speeds; provide less exposure for people walking; and better connect community destinations.
Increased public engagement	Demonstration projects are great way to show community members changes are being considered and provide a way for people to provide input on what they would like to see. These projects can further public awareness about safety concerns and how to consider options for active transportation improvements. This can further help

	understand the active transportation needs in communities.
Quick build potential	Demonstration projects are low-cost installations that support proven countermeasures. These projects can be implemented quickly and stay in place until more permanent infrastructure solutions are programmed.

Provide any additional description, if necessary:

Click or tap here to enter text.

14 How broadly might this innovation be deployed for other applications. in the transportation industry (including other disciplines of a DOT, other transportation modes, and private industry)?

Demonstration projects or quick builds can be supported throughout DOTs. They can bridge planning to operations and infrastructure, and

Market Readiness (20 points)

The AII selection process will favor innovations that can be adopted with a reasonable amount of effort and cost, commensurate with the payoff potential.

15. What specific actions would another organization need to take along each of the following dimensions to adopt this innovation?

Check boxes that apply	Dimensions	Please describe:
☐	Gaining executive leadership support	Click or tap here to enter text.
☐	Communicating benefits	Click or tap here to enter text.
☐	Overcoming funding constraints	Click or tap here to enter text.
☐	Acquiring in-house capabilities	Click or tap here to enter text.
☐	Addressing legal issues (if applicable) (e.g., liability and intellectual property)	Click or tap here to enter text.
☐	Resolving conflicts with existing national/state regulations and standards	Click or tap here to enter text.
☐	Other challenges	Click or tap here to enter text.

16. Please provide details of cost, effort, and length of time expended to deploy the innovation in your organization.

Cost: Click or tap here to enter text.

Level of Effort: Click or tap here to enter text.

Time: Click or tap here to enter text.

17. To what extent might implementation of this innovation require the involvement of third parties, including vendors, contractors, and consultants? If so, please describe. List the type of expertise required for implementation.

Click or tap here to enter text.