



COMMONWEALTH of VIRGINIA

Commonwealth Transportation Board

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Agenda item # 10

RESOLUTION OF THE COMMONWEALTH TRANSPORTATION BOARD

December 11, 2019

MOTION

Made By: Mr. Brown, Seconded By: Mr. Kasprowicz
Action: Motion Carried, Unanimously

Title: Approval of Highway Safety Improvement Program Project Prioritization Policy

WHEREAS, pursuant to §2.2-229 of the *Code of Virginia*, as amended by Chapter 828 of the 2018 Acts of Assembly, it is the responsibility of the Office of Intermodal Planning and Investment (OIPI) to develop measures and targets related to the performance of the Commonwealth's surface transportation network for the Commonwealth Transportation Board's (Board) approval, including any performance measurement required by Title 23 or 49 of the *United States Code*; and

WHEREAS, the Board is committed to the safety of all roadway users across the Commonwealth and has directed OIPI, in consultation with the Virginia Department of Transportation (VDOT) and Department of Motor Vehicles (DMV), to develop a data-driven process to establish targets for Federal Safety Performance Measures in accordance with 23 U.S.C. 150 and 23 CFR §§ 490.207, 490.209, 490.213 and 924.15; and

WHEREAS, at its June 19, 2019 meeting the Board adopted Safety Performance Targets for calendar year 2020 and found the anticipated safety outcomes associated with the Safety Performance Targets to be unacceptable, and further directed OIPI, working collaboratively with VDOT and DMV, to develop a plan resulting in a net reduction in fatal and serious injury crashes with such plans to consider policy, legislative, and investment strategies; and

WHEREAS, a key finding from the data-driven analysis demonstrates that systemic and hybrid corridor safety projects—low-cost improvements, such as high-visibility backplates, flashing yellow left turn signals, and rumble strips, systemically spread on a roadway network—provide more potential crash reduction benefits for lower costs than do spot improvement projects; and

WHEREAS, in its workshop meetings on June 18, 2019, July 16, 2019, and September 17, 2019, the Board was presented with information and recommendations relating to the prioritization and investment of limited Highway Safety Improvement Program (HSIP) funds to maximize the benefits in crash reductions and make progress toward the Commonwealth’s “Toward Zero Deaths” vision for roadway safety; and

WHEREAS, in its action meeting on September 18, 2019, the Board approved an amendment to the Fiscal Year 2020-2025 Six-Year Improvement Program to begin deployment of systemic safety improvements included in an initial Implementation Plan to accelerate advancement of projects supporting the Board’s desire to reduce serious injury and fatal crashes; and

WHEREAS, nine public meetings were held on October 15, 2019 in Glen Allen, October 22, 2019 in Fairfax, October 28, 2019 in Harrisonburg, October 30, 2019 in Roanoke, November 4, 2019 in Lynchburg, November 6, 2019 in Suffolk, November 7, 2019 in Bristol, November 12, 2019 in Fredericksburg, and November 13, 2019 in Culpeper to receive public comments prior to the Board’s adoption of policy changes for prioritizing the use of funds; and

WHEREAS, after due consideration of comments received, the Board believes that the policy and process as set forth below should be adopted and used to select projects for HSIP funding in the Six-Year Improvement Program (SYIP) to improve transparency in the project selection process, accelerate delivery of selected projects and investment strategies, and aid in achieving reductions in fatalities, serious injuries, and non-motorized crashes (HSIP Project Prioritization Policy).

NOW THEREFORE, BE IT RESOLVED, that the Commonwealth Transportation Board hereby approves the following policy and process to govern prioritization and selection of HSIP projects for funding:

1. VDOT, in consultation with OIPI, shall develop Implementation Plans for the deployment of systemic and hybrid safety countermeasures across the roadway network, including VDOT and locally-maintained facilities. Such Implementation Plans shall:
 - a. Include, but not be limited to: edge-line rumble strips on the primary system, centerline rumble strips on the primary system, pavement shoulder wedge, chevrons and curve visibility enhancements, high-visibility traffic signal backplates, flashing yellow arrows, unsignalized intersection signage and marking, pedestrian signals and crossings, and other systemic/hybrid safety improvements as identified through data-driven analysis;

- b. Be consistent with the roadway departure, intersection, and bicycle and pedestrian emphasis areas included in Virginia's current Strategic Highway Safety Plan;
 - c. Be based on an assessment of risk and priority systemic improvements to include the locations, appropriate systemic treatments, cost estimates, and schedules on all public roads;
 - d. Include an estimate of the total number of fatalities and serious injuries reduced as a result of fully deploying the systemic safety improvements identified in the Implementation Plans; and
 - e. Be updated periodically to advance additional systemic safety improvements.
2. Highway Safety Improvement Program (HSIP) funds will be distributed as follows:
 - a. After funds are set aside for program administration (approximately 5 to 10 percent), the remaining funds shall be programmed to projects with a goal of approximately 80 percent of funds allocated to systemic and hybrid safety improvements over the six-year improvement program.
 - b. Funding for localities shall be based on the proportion of fatalities on local versus VDOT-maintained roads with funds available beginning in Fiscal Year 2024 for use on systemic safety improvements.
 - c. Funds for VDOT-maintained roads to be programmed based on risk-based locations of systemic safety treatments included in the Implementation Plans.
3. In order to accelerate deployment of systemic and hybrid safety improvements, the Board will not approve new spot improvement projects until the Fiscal Year 2026-2031 SYIP.
 - a. The Board may consider funding spot improvement projects prior to the Fiscal Year 2026-2031 SYIP, should a proposed spot improvement project address a dire and immediate safety need and receive the recommendation of the Commissioner of Highways by meeting the following minimum thresholds:
 - i. Benefit/Cost ratio greater than 15;
 - ii. Project to be implemented or under construction in less than one year; and
 - iii. Proposed scope will address the observed crash types.
4. In cases where programmed funds are no longer needed for the delivery of a project, or additional funds become available (beyond that assumed in the Implementation Plans), the unexpended surplus and unallocated funds will be reserved and managed centrally to address budget adjustments on existing HSIP funded projects, to further advance systemic safety improvements, or to fund spot improvement projects pursuant to Item 3.

5. A project that has been selected for funding must be initiated, and at least a portion of the programmed funds expended, within one year of the budgeted year of allocation or funding may be subject to reprogramming. In the event a locally-administered project is not advanced to the next phase of construction when requested by the Board, the locality may be required, pursuant to §33.2-214 of the *Code of Virginia*, to reimburse VDOT for all state and federal funds expended on the project.
6. On an annual basis, VDOT and OIPI will report on the following:
 - a. Progress on advancement of systemic and hybrid safety improvements;
 - b. Funding distribution information;
 - c. Anticipated benefits of investments and performance to date; and
 - d. Recommendations for changes to the Implementation Plans and HSIP Project Prioritization Policy, as needed.

BE IT FURTHER RESOLVED, that the Board understands the use of HSIP funds requires VDOT to meet a number of federal requirements and this Policy does not supersede federal requirements, including those governing obligation authority and project delivery. Federal safety funds not subject to this Policy include High Risk Rural Roads (23 USC 148(g)) and Railway-Highway Crossings (23 USC 130).

BE IT FURTHER RESOLVED, that the Board directs OIPI and VDOT to take all actions necessary to implement and administer this Policy, including, but not limited to, the development of Implementation Plans and supporting guidance establishing the process for screening, scoring and selection of projects.

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CTB Decision Brief

Approval of Highway Safety Improvement Program Project Prioritization Policy

Issue: In accordance with §§2.2-229 and 33.2-353 of the *Code of Virginia*, the Commonwealth Transportation Board (CTB) must approve measures and targets related to the performance of the Commonwealth's surface transportation network, including any performance measurement required by Title 23 or 49 of the United States Code. In accordance with 23 CFR §§490.207, 490.209, 490.213 and 924.15, targets for five federally mandated safety performance measures (Safety Performance Targets) must be established annually and reported to FHWA before August 31 of each year by the Virginia Department of Transportation (VDOT). Furthermore, three of the five Safety Performance Targets must be submitted to NHTSA by Virginia's Highway Safety Office (HSO) at the Department of Motor Vehicles (DMV) before June 30 of each year. CTB approval of the Office of Intermodal Planning and Investment (OIPI), VDOT and DMV proposed Safety Performance Targets is requested annually. At its June 2019 meeting, the Board adopted Safety Performance Targets and found the anticipated safety outcomes to be unacceptable and directed OIPI, working with VDOT and DMV, to develop a plan that will result in a net reduction in fatal and serious injury crashes as a result of policy, legislative, and investment strategies. As a result of conducting a data driven analysis to establish targets for federal safety performance measures, systemic and hybrid safety improvements were demonstrated to provide greater crash reduction benefits compared to spot improvements. OIPI and VDOT have identified opportunities for improved performance and recommend actions to achieve targets for the Safety Performance Measures and make progress toward the Commonwealth's "Toward Zero Deaths" vision for roadway safety. Accordingly, Board approval of a new HSIP prioritization policy and process is sought.

Facts: In 2012 Congress passed the Moving Ahead for Progress in the 21st Century (MAP-21) and in 2015, the Fixing America's Surface Transportation (FAST) Act that mandated/continued the mandate for establishment of performance management to transform the Federal-aid highway program. Resulting regulations provide a means to the most efficient investment of Federal transportation funds by refocusing on national transportation goals, increasing the accountability and transparency of the Federal-aid highway program, and improving project decision-making through performance-based planning and programming. One such national transportation goal focuses on safety and seeks to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. In 2018, the CTB adopted Safety Performance Targets for 2019, but directed OIPI and VDOT to develop a data-driven process to establish targets and evaluate current investment strategies. In June 2019, the CTB adopted data-driven Safety Performance Targets for 2020 based on rigorous statistical methods; however, modeling results for Safety Performance Targets project increases in fatal crashes, which the CTB found unacceptable. The CTB further directed OIPI, VDOT and DMV to develop a plan that would result in a net reduction in fatal and serious injury crashes.

In its workshop meetings in June, July and September 2019, the CTB was presented with information and recommendations for an outcome-focused HSIP policy with the objective to reduce fatal and serious injury crashes through increased funding to systemic and hybrid safety improvements and to guide prioritization and investment of HSIP funds to provide the highest benefit per dollar and make progress toward the Commonwealth's "Toward Zero Deaths" vision

for roadway safety. Additionally, the Board was presented an initial Implementation Plan which included a cost estimate and schedule for deployment of eight priority systemic improvements along with an estimate of the annual number of fatalities and serious injuries reduced once fully deployed. At its September meeting, the CTB amended the FY2020-2025 SYIP, approving the project recommendations from the initial Implementation Plan to begin deployment of systemic safety improvements in all nine construction districts.

As a result of this analysis, the following is proposed for establishment of, and inclusion in, a policy for prioritization and selection of projects for HSIP funds:

- VDOT, in consultation with OIPI, shall develop Implementation Plans for the deployment of systemic and hybrid safety improvements across the roadway network, including VDOT and locally-maintained facilities. Such Implementation Plans shall:
 - Include, but not be limited to: edge-line rumble strips on the primary system, centerline rumble strips on the primary system, pavement shoulder wedge, chevrons and curve visibility enhancements, high-visibility traffic signal backplates, flashing yellow arrows, unsignalized intersection signage and marking, pedestrian signals and crossings, and other systemic/hybrid safety improvements as identified through data-driven analysis;
 - Be consistent with the roadway departure, intersection, and bicycle and pedestrian emphasis areas included in Virginia's current Strategic Highway Safety Plan;
 - Be based on an assessment of risk and priority systemic improvements to include the locations, appropriate systemic treatments, cost estimates, and schedules on all public roads;
 - Include an estimate of the total number of fatalities and serious injuries reduced as a result of fully deploying the systemic safety improvements identified in the Implementation Plans; and
 - Be updated periodically to advance additional systemic safety improvements.
- The approach to distribution and management of HSIP funding distribution to address:
 - Setting aside funds for program administration (approximately 5 to 10 percent), with the remaining funds to be programmed to projects with a goal of approximately 80 percent of funds allocated to systemic and hybrid safety improvements over the six-year improvement program. The Fiscal Year 2020-2025 SYIP currently allocates approximately 81 percent to systemic and hybrid projects across the six years.
 - Establishing funds for localities based on the proportion of fatalities on local versus VDOT-maintained roads with funds available beginning in Fiscal Year 2024 for use on systemic safety improvements.
 - Funding for VDOT-maintained roads based on risk-based locations of systemic safety improvements included in the initial and subsequent Implementation Plans.
 - Establishing the process for managing surplus or additional HSIP funds.
 - Establishing the process for ensuring timely advancement and expenditure of HSIP funding on projects included in the SYIP.

- The approach to select new spot improvement projects:
 - To accelerate deployment of systemic and hybrid safety improvements, the CTB should not approve new spot improvement projects until the Fiscal Year 2026-2031 SYIP.
 - The Board may consider funding spot improvement projects prior to the Fiscal Year 2026-2031 SYIP, should a proposed spot improvement project meet a dire and immediate safety need and receive the recommendation of the Commissioner of Highways by meeting the following minimum thresholds:
 - Benefit/Cost ratio greater than 15;
 - Project to be implemented or under construction in less than one year; and
 - Proposed scope will address the observed crash types.
- In cases where programmed funds are no longer needed for the delivery of a project, or additional funds become available (beyond that assumed in the Implementation Plans), the unexpended surplus and unallocated funds will be reserved and managed centrally to address budget adjustments on existing HSIP funded projects, to further advance systemic safety improvements, or to fund spot improvement projects pursuant to Item 3.
- A project that has been selected for funding must be initiated, and at least a portion of the programmed funds expended, within one year of the budgeted year of allocation or funding may be subject to reprogramming. In the event a locally-administered project is not advanced to the next phase of construction when requested by the Board, the locality may be required, pursuant to §33.2-214 of the *Code of Virginia*, to reimburse VDOT for all state and federal funds expended on the project.
- On an annual basis, OIPI and VDOT will report on the following:
 - Progress on advancement of systemic treatments;
 - Funding distribution information;
 - Anticipated benefits of investments and performance to date; and
 - Recommendations for changes to the Implementation Plans and HSIP Project Prioritization Policy.

A resolution reflecting the above referenced recommendations has been prepared for the CTB's consideration.

Recommendations: OIPI, in consultation with VDOT, recommends the CTB adopt the HSIP Project prioritization policy to govern, prioritize, and select projects for funding. Further, it is requested that the Commissioner of Highways be authorized to take all actions necessary to implement and administer the prioritization policy and process.

Action Required by CTB: The CTB will be presented with a resolution for a formal vote to approve the HSIP Prioritization Policy. Approval by majority vote of the resolution is required.

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Result, if Approved: If approved, VDOT and OIPI will develop applicable guidance and implement the HSIP Prioritization Policy.

Options: Approve, Deny, or Defer.

Public Comments/Reactions: N/A

Summary of Comments Received on the Highway Safety Improvement Program (HSIP) Project Prioritization Policy

ID	Name of Submitter	Agency or Public	Submitter's Affiliation (if applicable)	Location	Construction District	Comment	Proposed Response
1	Melissa McMahon	Agency	Alexandria Transportation Commission	City of Alexandria	Northern Virginia	<p>“...the Highway Safety Improvement Program (HSIP) has funded many important improvements at high crash locations. We urge the CTB not to ignore the needs of highways in urban areas like Route 1 and promote pedestrian and bicycle safety projects that have been shown to increase safety. A great example is the King Street road diet, which has reduced average annual crashes by 58%. These projects will make walking and biking safer and more convenient. Specifically, the Commission urges the CTB to:</p> <ul style="list-style-type: none"> • Include bicycle infrastructure as Systemic Safety Projects • Expand definition of “Pedestrian Crossings” to include more than simply crosswalks • Provide more funding for intersection and corridor improvements 	<p>VDOT is focused on completing the deployment of eight priority systemic safety improvements across its network. While the proposed change in policy does not explicitly call out bicycle infrastructure or improvements as one of the eight priority systemic safety improvements, the policy provides flexibility for other systemic/hybrid safety improvements to be funded in the future, so long as the improvements are grounded in data-driven analysis that shows positive safety outcomes and included in VDOT's systemic safety implementation plan. VDOT's Initial Implementation Plan (a requirement of the proposed policy changes) does not include funding for bicycle infrastructure or improvements. Implementation Plans will be updated in future years as VDOT make progress toward completely deploying these eight priority systemic safety improvements across the network. Such updates will offer opportunities for adjustments in priorities.</p> <p>Regarding pedestrian safety improvements, while the proposed policy categorizes the pedestrian-specific systemic safety improvement as “pedestrian signals and crossings,” this categorization should not be considered to limit eligible crossing improvements to solely pedestrian signals and crosswalks. Improvements such as bulb/bump outs, pedestrian refuge islands, rectangular rapid flashing beacons, and others are also eligible.</p>
2	Dennis Leach	Agency	Arlington County	Arlington County	Northern Virginia	<p>HSIP has or will be funding many important improvements at high crash locations in the County, including the Arlington Blvd / Washington Blvd interchange. Under the current evaluation criteria, HSIP is funding only improvements to two ramps in one quadrant of that interchange. It may be impossible to complete the remaining movements under the proposed shift to more heavily prioritizing systemic improvements over spot improvements. The proposed shift has potential to improve overall safety but may disadvantage urban areas if it does not adequately account for the heterogeneity of older, urban street networks where one size does not fit all. Half of the potentially eligible systemic improvements are focused on suburban or rural highway-related safety, ignoring the needs of urban areas. For example, there should be a bicycle safety component. The proposed changes ignore bicycles completely. The Pedestrian Crossings systemic / hybrid improvement category should include alternative and complimentary safety improvements like Rectangular Rapid Flash Beacons (RRFPs), curb extensions, pedestrian refuges, and more, rather than just crosswalks and countdown signals. While we see the potential for the proposed shift to improve outcomes, it needs more flexible guidelines, and existing spot improvements programs need a chance to be funded to completion</p>	<p>VDOT is focused on completing the deployment of eight priority systemic safety improvements across its network. While the proposed change in policy does not explicitly call out bicycle infrastructure or improvements as one of the eight priority systemic safety improvements, the policy provides flexibility for other systemic/hybrid safety improvements to be funded in the future, so long as the improvements are grounded in data-driven analysis that shows positive safety outcomes and included in VDOT's systemic safety implementation plan. VDOT's Initial Implementation Plan (a requirement of the proposed policy changes) does not include funding for bicycle infrastructure or improvements. Implementation Plans will be updated in future years as VDOT make progress toward completely deploying these eight priority systemic safety improvements across the network. Such updates will offer opportunities for adjustments in priorities.</p> <p>Regarding pedestrian safety improvements, while the proposed policy categorizes the pedestrian-specific systemic safety improvement as “pedestrian signals and crossings,” this categorization should not be considered to limit eligible improvements to solely signals and crosswalks. Improvements such as bulb/bump outs, pedestrian refuge islands, rectangular rapid flashing beacons, and others are also eligible.</p> <p>Until FY2026, spot improvement projects will only be considered as an exception to the HSIP Project Prioritization Policy and will require the Commissioner to approve and receive the concurrence of the CTB. Funds are available again for spot improvement projects beginning in FY2026 and will receive about 20 percent of the annual HSIP funding. Guidance will be provided to localities regarding HSIP applications for systemic safety improvements in 2023 in advance of the FY2024 HSIP application period.</p> <p>Regarding the applicability of all eight priority systemic safety improvements to urban, suburban, and rural communities: The purpose of HSIP is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. Meeting this purpose requires identifying safety improvements that address various crash types and settings. The majority of serious crashes occur in rural and suburban areas, so the eight countermeasures include a mix of rural, suburban, and urban treatments.</p>

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ID	Name of Submitter	Agency or Public	Submitter's Affiliation (if applicable)	Location	Construction District	Comment	Proposed Response
3	F. Wyatt Shields	Agency	City of Falls Church	City of Falls Church	Northern Virginia	The City does not support proposed changes to the Highway Safety Improvement Program. Proposed changes to the program would increase the amount of funding available for systemic improvements, while decreasing the amount of funding available for spot improvements. The City experiences a great deal of cut through traffic and higher than posted speeds on neighborhood streets. Spot improvements such as speed humps, mini-traffic circles, new or missing sidewalk segments, curb extensions, pedestrian refuges, pedestrian signals and updated access ramps increase safety for pedestrians and bicycles, by reducing motor vehicle speeds and/or volumes. Urban corridors should not be defined as large roads for automobiles but as segments of a network that provides travelers with multiple options of travel modes, including pedestrian, bicycle, transit and automobile.	<p>Until FY2026, spot improvement projects will only be considered as an exception to the HSIP Project Prioritization Policy and will require the Commissioner to approve and receive the concurrence of the CTB. Funds are available again for spot improvement projects beginning in FY2026 and will receive about 20 percent of the annual HSIP funding. Guidance will be provided to localities regarding HSIP applications for systemic safety improvements in 2023 in advance of the FY2024 HSIP application period.</p> <p>Many of the pedestrian safety improvements noted by the City of Falls Church in its comment letter would be eligible for HSIP funding under the new policy.</p>
4	Eric King	Public	Safe Routes to School Coordinator, Harrisonburg, VA	Harrisonburg	Staunton	Thank you for the prioritization of systemic, non-pavement safety improvements in the Highway Safety Improvement Plan. These solutions save money and do not enable increased congestion and hazards for cyclists and pedestrians.	Acknowledged. No response required.
5	Janet I. Trettner	Public		Keezletown	Staunton	<p>I have just read about the study conducted by VADOT that suggests eight targeted and data-driven solutions to highway safety challenges here in Virginia: high-visibility traffic light backplates; flashing yellow arrows on traffic lights; clear signage at intersections without traffic lights; curve signs on roadways; bold pedestrian crosswalk markings; roadside shoulders; centerline rumble strips; and edge line rumble strips.</p> <p>At the upcoming Fall Transportation Meeting to take place in Harrisonburg on October 28, 2019, please include my support of the adoption of these solutions.</p>	Acknowledged. No response required.
6	Jared Stolfus	Public			Staunton	I just wanted to write to THANK YOU for a thoughtful safety study and thinking outside the norm of additional paving to solve the problem. I have a PhD in Sustainability, and teach Environmental Science courses at James Madison University, and the solutions you propose for improving safety are practical and affordable, with a minimal environmental impact. You've given me a great example to show students about the benefits of thinking outside the box in such a real, and local setting. Thank you for a job well done!	Acknowledged. No response required.
7	Larry Korte	Public		Churchville	Staunton	Thank you for prioritizing pavement-free safety upgrades at lower cost.	Acknowledged. No response required.
8	Kim Sandum	Agency	Alliance for the Shenandoah Valley		Staunton	<p>Thank you for the opportunity to comment on the Highway Safety Improvement Plan proposed changes. The Alliance for the Shenandoah Valley is a non-profit organization working to improve our land, water, and way of life in the Shenandoah Valley, recognizing the extraordinary resources found here.</p> <p>We applaud the shifting emphasis from spot improvements to more systemic categories. As your data illuminates, cheaper and more effective solutions to safety issues can be uncovered when the focus is not mostly on large infrastructure projects. We hope the Commonwealth Transportation Board will approve this focus shift to more systemic solutions to safety problems.</p>	Acknowledged. No response required.

Summary of Comments Received on the Highway Safety Improvement Program (HSIP) Project Prioritization Policy

ID	Name of Submitter	Agency or Public	Submitter's Affiliation (if applicable)	Location	Construction District	Comment	Proposed Response
9	Tom Benevento	Public		Harrisonburg	Staunton	<p>Thank you for proposing implementation of eight lower-cost, pavement-free safety upgrades that have measured success in crash reduction and will reduce pavement in our communities.</p> <p>I also encourage your continued work to increase bicycle infrastructure throughout the state, such as protected bike lanes, and funding for shared use paths.</p>	Acknowledged. No response required.