

# MnDOT Project Selection Policy

## Preliminary Draft Approach for Stakeholder Review and Feedback

This document outlines the Minnesota Department of Transportation's proposed approach to implementing Minnesota Laws 2017, Chapter 3, Section 124's requirement of an objective and transparent project selection policy that uses numeric scoring.

*MnDOT will accept feedback on this preliminary draft through summer 2018, but requests comments, questions and suggestions be submitted if possible by July 18, 2018 to:*

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PRELIMINARY DRAFT FOR STAKEHOLDER REVIEW

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## Plain Language Summary of MnDOT Project Selection

The Minnesota Department of Transportation prioritizes investments to keep the state highway network<sup>1</sup> in a state of good repair. MnDOT's 20-year State Highway Investment Plan (MnSHIP) distributes funding to address a range of goals and objectives.<sup>2</sup> MnSHIP determines the amount of money available for different types of improvements such as safety, mobility, condition of existing roads and bridges, and other goals. MnSHIP dedicates the majority of funding to fixing pavement and bridges.

As required by state law, MnDOT's new project selection policy will include the use of scores to prioritize and select highway construction projects. Project selection is the decision to fund a project and add to the list of planned and programmed projects. The score assigned to candidate projects is a key factor in the project selection decision, but MnDOT must consider a wide range of factors not easily quantifiable. Not all of these factors will be included in the numeric score assigned to projects. MnDOT will provide a short explanation when a high scoring project is not selected or when a lower scoring project is selected.

MnDOT scores and selects stretches of pavement and specific bridges that need work five to ten years before construction. Once selected, MnDOT identifies the appropriate fix as well as other legal requirements, opportunities to advance legislative goals, objectives in the state plans, and other improvements that make sense to do at the same time. The department follows a complete streets approach, which considers the needs of all the different types of vehicles and people who will use the road or bridge. MnDOT balances all of the identified needs and opportunities against the funding guidance of MnSHIP and looks for cost-effective and affordable solutions. MnDOT also works with local partners and seeks public input before finalizing the details of the project and exact timing.

For other types of projects, such as targeted safety improvements or major expansions of the system, MnDOT usually selects projects three to six years before construction. MnDOT manages a variety of special programs with specific objectives. Each program scores candidate projects against a set of criteria. Cities, counties and other groups may apply for funding or suggest specific project ideas for many of these programs. Examples include the Highway Safety Improvement Program, Transportation Economic Development Program, Highway Freight Program, and Corridors of Commerce.

MnDOT also sets aside a small amount of funding to fix and maintain things like rest areas, traffic cameras and ramp meters, historic roadside properties, truck weigh stations, noise walls, and other infrastructure. Each has a dedicated selection process. Projects are typically scored and selected two to five years before construction.

Finally, MnDOT holds a small amount of funding to fix damage caused by each winter season or make emergency repairs. The department selects these projects the same year they are constructed. They are not selected using numeric scoring.

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<sup>1</sup> The approximately 12,000 mile state highway network includes all roads labeled Interstate, US and MN (examples include I-94, US 169, and MN 55)

<sup>2</sup> For more information about MnSHIP, go to: <http://minnesotago.org/final-plans/mnship-final-plan>

## Technical Overview

The following outlines the Minnesota Department of Transportation's proposed approach to implementing Minnesota Laws 2017, Chapter 3, Section 124, which requires MnDOT to develop and implement a transparent and objective project selection policy. The full text of Minnesota Laws 2017, Chapter 3, Section 124 is included in Appendix A.

### Decisions Made Before Project Selection

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MnDOT's selection of state highway construction projects follows the policy direction established in the Statewide Multimodal Transportation Plan and the investment guidance in the 20-Year State Highway Investment Plan (MnSHIP).<sup>3</sup> The Statewide Multimodal Transportation Plan establishes overarching objectives, strategies and performance measures for the state highway system as well as the rest of the transportation system in Minnesota. For urbanized areas with populations greater than 50,000, the long range plans of Metropolitan Planning Organizations<sup>4</sup> establish objectives, strategies, performance measures and investment priorities for the transportation system, including the state highway system.

MnSHIP establishes an overall distribution of expected revenue to meet the objectives, strategies and performance measures in the Statewide Multimodal Transportation Plan on the state highway system. The plan also includes expected outcomes and performance targets the agency uses to inform project selection. MnSHIP dedicates the majority of funding to fixing pavement and bridges, but also allocates funding to other categories such as safety, congestion relief, other roadside infrastructure, and improvements for pedestrians, bicyclists and freight.

The strategies and objectives in the Statewide Multimodal Transportation Plan and metropolitan plans and the investment direction in MnSHIP shape the projects that are ultimately delivered, and the process MnDOT uses to develop and deliver those projects.

Based on the investment guidance in MnSHIP and federal and state laws, MnDOT divides available and planned funding into programs and categories within which projects are selected. For projects selected within each of the agency's eight districts, MnDOT distributes anticipated funding by a formula, which considers the condition of pavement and bridges, size of the network, and use of the system within each district.

The new project selection policy will not change the plans or the process by which funding is distributed to specific programs and districts. The policy will affect how projects are selected within each program and district.

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<sup>3</sup> For more information about the Statewide Multimodal Transportation Plan and the 20-Year Minnesota State Highway Investment Plan, go to: <http://www.minnesotago.org>

<sup>4</sup> For a list of the eight MPOs in Minnesota, visit: <https://www.dot.state.mn.us/planning/program/mpordcatp.html>

## Project Selection vs. Project Development

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The selection of a project is one decision point in a long series of decisions that shape a project. The new project selection policy will only govern the project selection decision, not the full range of decisions that are part of the project development process.

The table below compares project selection and project development.

Project Selection	Project Development
<p>Project selection is the decision to fund a project and add to the list of planned and programmed projects in either the 4 year State Transportation Improvement Program (STIP)<sup>5</sup> or the 10 year Capital Highway Investment Plan (CHIP).<sup>6</sup></p>	<p>Project develop includes:</p> <ul style="list-style-type: none"> <li>• Process of deciding the details of what is included/not included and the budget of a project</li> <li>• Public involvement &amp; stakeholder coordination</li> <li>• Environmental review and permits</li> <li>• Construction timing, staging and traffic management</li> <li>• Contracting and delivery mechanism</li> </ul>

The level of project development that has occurred at the time a project is selected varies by project selection process.

## Use of Scores and Transparency

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Based on the requirements of Minnesota Laws 2017, Chapter 3, Section 124, MnDOT will post:

- The criteria and methodology for scoring projects for each project selection process the agency uses to select state highway construction projects
- The scores for all projects selected and those evaluated, but not selected

The score assigned to candidate projects is a key factor in the project selection decision, but MnDOT must consider a wide range of factors both for individual projects and at the system level. Many of those factors are not easily quantifiable and will not be included in the numeric score assigned to projects. When a high scoring project is not selected or when a lower scoring project is selected, MnDOT will provide a short explanation for the reasoning behind the decision in addition to the project score.

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<sup>5</sup> The current STIP is available at: <http://www.dot.state.mn.us/planning/program/stip.html>

<sup>6</sup> The current CHIP is available at: <http://www.dot.state.mn.us/planning/10yearplan/index.html>

Projects change and evolve through the project development process as MnDOT gets more detailed information, works with local partners and regulatory agencies, and seeks public and stakeholder input. Significant time and resources (both MnDOT's and that of local and regional agencies, the public and others) go into developing projects. The new project selection policy will establish a limited number of thresholds where an updated score would be required, but the vast majority of project level changes and decisions will not affect the score assigned to the project when it was selected.

## **Role of Public and Stakeholder Involvement**

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The public and stakeholders can influence MnDOT construction projects through participation in the planning, programming and project development processes.

MnDOT conducts extensive public and stakeholder involvement when developing the Statewide Multimodal Transportation Plan, MnSHIP and other plans, which set the framework for project selection and how projects are developed. Participation in other MnDOT, metropolitan, regional and local plans and studies also shape individual projects and project prioritization.

MnDOT engages partners, stakeholders and the public in the project development process. Involvement at this stage influences the details of what is included and not included in a project, as well as the timing, delivery mechanism, and traffic mitigation of a project among other details.

While involvement in the planning process and project development offer the greatest opportunity to influence the projects MnDOT delivers, the public and stakeholders can also review and comment on MnDOT's draft project selection decisions. Prior to finalizing the State Transportation Improvement Program, MnDOT posts a draft for public review and comment. Under the new policy, MnDOT will also post the scores for projects considered but not selected and the reasoning behind selection decisions with the drafts. In addition, each Metropolitan Planning Organization in the state posts drafts of their four year Transportation Improvement Programs for public review and comment, which include all federally funded and regionally significant MnDOT highway construction projects located within their planning boundaries.

MnDOT developed the 10-Year Capital Highway Investment Plan to improve early project stakeholder coordination. Under the new policy, the CHIP will include the scores for projects and MnDOT will also post the scores for projects considered but not selected and the reasoning behind selection decisions. The public and stakeholders can review and submit comments on the CHIP at any time.

A few competitive programs, such as Corridors of Commerce, allow the public and stakeholders to submit project ideas as well as express support for specific candidate projects.



## Environmental Justice and Equity

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Consistent with Title VI of the 1964 Civil Rights Act and Presidential Executive Order 12898,<sup>7</sup> MnDOT works to ensure the full and fair participation of potentially affected communities in the transportation decision-making process. MnDOT specifically reaches out to low-income and minority populations when developing plans and during the project development process.

MnDOT also analyses the potential impact of the department's plans and projects both at the system level and for each individual project. While not specifically required by Title VI or the Executive Order, these analyses typically also include persons age 65 and older, persons age 17 and younger, persons with limited English proficiency, and households with zero vehicles because these groups have unique transportation needs.

During the project selection process, MnDOT must consider two fundamental principles of environmental justice:

- To avoid, minimize or mitigate disproportionately high adverse human health and environmental effects, including social and economic effects, on minority and low-income populations.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

For most of MnDOT's project selection processes, the positive or adverse impacts of candidate projects on environmental justice populations are not well known at the time projects are selected. Determining the potential adverse impacts and/or benefits of a project requires significant analysis, which is completed during the project development process. When information is known about a candidate project's impact and benefits, MnDOT incorporates those considerations as well as the geographic distribution of high scoring candidate projects as qualitative factors in the decision to select or not select a project.

For processes that select projects where MnDOT is more confident these types of projects would benefit adjacent environmental justice populations, MnDOT is proposing to include environmental justice and equity in the score of candidate projects. These include the selection of urban non-freeway/non-expressway pavement projects (see page 14 and Appendix D) and the rehabilitation and replacement of pedestrian bridges and underpasses (see page 15 and Appendix E).

MnDOT is currently studying equity and engaging communities in conversation about how transportation affects equity. The initiative will further define equity and may identify additional opportunities to include equity and environmental justice in project selection and scoring.

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<sup>7</sup> [https://www.fhwa.dot.gov/environment/environmental\\_justice/](https://www.fhwa.dot.gov/environment/environmental_justice/)

## Pavement and Bridge Projects

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For MnDOT's core program focused on asset management, the department scores pavement and bridge needs. Projects are selected to address a primary pavement or bridge need and added to the 10-year Capital Highway Investment Plan.

The selection of pavement and bridge projects are informed by district staff, experts from MnDOT's bridge and materials offices and two asset management software programs: the Highway Pavement Management Application (HPMA) and the Bridge Replacement and Improvement Management System (BRIM).

Pavement and bridges on the National Highway System (NHS) are scored and selected separately from pavement and bridges off the system. A map of the state highway network showing which roads are part of the NHS is included in Appendix B. In addition, urban non-freeway/non-expressway pavement projects are scored separately from other pavements projects, because of their complexity, utilities and other infrastructure, and level of required local coordination and public involvement.

Once selected, MnDOT then scopes the project to identify the exact fix and address other needs, legal requirements, issues and opportunities in coordination with local partners, and considers public input. In the process, pavement work may be added to a bridge project or vice versa. The department follows a context-sensitive complete streets approach, which considers the needs of all users. The final project may address a substantial number of needs beyond the pavement or bridge need that precipitated the project. Projects may move years based on local coordination, project delivery, timing of other nearby construction projects, and funding shifts.

The need score would remain unchanged unless the project no longer addresses the precipitating need, or if the nature of the project evolves so dramatically that it cannot reasonably be said to address the original need (for example, a mill and overlay pavement project becomes an interchange project).

The majority of MnDOT highway construction projects are pavement and bridge projects. They typically account for two-thirds to the three-fourths (69-75 percent) of the construction budget in most years.

## Major Capacity Expansion / Mobility Projects

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When developing pavement and bridge projects, MnDOT looks for opportunities to make targeted improvements to address safety and improve traffic flow. In some instances, larger investments are necessary. Most significant capacity and mobility projects (for example, converting a signalized intersection into an interchange or adding lanes to a freeway) are now selected through competitive programs like Corridors or Commerce or the Transportation Economic Development Program (see Appendix G for descriptions of these programs). However, MnSHIP does allocate some funding to address congestion relief and improve mobility.

Under the new project selection policy, the following types of projects will be scored and selected through a separate process from the main pavement and bridge project selection process:

- The addition of one lane mile or more (MnPASS, general purpose or auxiliary)
- New or significantly modified interchanges
- Any project requiring an Environmental Assessment or full Environmental Impact Statement
- Any project that includes a capacity expansion element costing \$10 million or more (the cost of the capacity is \$10 million, not the total project cost)

Projects initiated by cities and counties on the state highway system meeting one of the criteria above that receive funding through the Metropolitan Council's regional solicitation, Transportation Economic Development Program, or federal competitive programs like TIGER/INFRA/BUILD, would not need to be scored to receive MnDOT match funds. They would be considered selected through that competitive process.

In order to be selected, potential major capacity projects in the Minneapolis-St. Paul metropolitan area would also need the following two criteria to be true:

1. The location has existing, sustained congestion of at least one hour during am or pm peak periods.
2. The project has been identified in the Metropolitan Council's current Transportation Policy Plan or a supplemental planning study that's part of the regional planning process.

Stakeholder requests for capacity expansion that do not meet both criteria would not be eligible, but could compete in the Corridors of Commerce and Transportation Economic Development programs.

A Greater Minnesota mobility study is currently underway and will identify and prioritize locations for future investment. Based on that study, MnDOT will develop a separate scoring process for projects to improve mobility in Greater Minnesota.

MnDOT does not deliver many major capacity expansion projects, but each project can be very large. They typically account for 8-18 percent of the construction budget in most years.

## Specialty/Competitive Programs

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MnDOT manages a variety of special programs with specific objectives. Each program scores candidate projects against a set of criteria. Cities, counties and other groups may apply for funding or suggest specific project ideas for many of these programs.

- **Corridors of Commerce Program:** funds additional highway capacity on segments where there are currently bottlenecks in the system or projects that improve the movement of freight and reduce barriers to commerce.
- **Highway Freight Program:** funds projects with measurable benefits for freight transportation.
- **Highway Safety Improvement Program:** funds projects that reduce fatal and serious injury crashes.
- **Historic Roadside Properties Program:** funds the repair, rehabilitation and preservation of roadside properties that are either listed on, or eligible for, the National Register of Historic Places.
- **Intelligent Transportation Systems Program:** funds the installation of new or upgrade of existing electronics, communications, or information processing systems or services to improve the efficiency and safety of the state highway system.
- **Local Partnership Program** (Formerly District Cooperative/Municipal Agreement Programs): funds locally identified improvements to state highways, particularly locations where the local transportation network intersects with the state system.
- **Railway-Highway Crossing Program:** funds the elimination of hazards at railway-highway crossings, including the closure and consolidation of crossings, replacement of antiquated equipment, and new grade crossing controls.
- **Safety Rest Area Program:** funds construction, repair and rehabilitation of rest areas and waysides.
- **Stand Alone Noise Barriers Program:** fund construction of new noise barriers along state highways in locations where no noise abatement measures currently exist and no major construction projects are currently programmed.
- **Transportation Economic Development Program:** funds projects that support job creation and retention as well as other improvements with measurable economic benefits.
- **Weigh Stations Capital Improvement Program:** funds the installation, repair and replacement of the physical infrastructure necessary for the enforcement of state and federal weight and size commercial motor carrier laws.

Project funding from these programs collectively accounts for 12-20 percent of the construction budget in most years.

More information about each program is included in Appendix G.

## Infrequent Project Categories

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The vast majority of MnDOT construction projects will be selected through the pavement, bridge, capacity or specialty/competitive programs. Improvements for safety, traffic flow, freight, biking, walking, noise mitigation, drainage, etc. are included in those projects. However, MnDOT occasionally will develop a standalone construction project that does not fall into one of those categories. For example, a standalone roundabout to improve safety not funded by the Highway Safety Improvement Program, shoulder widening not part of a pavement project, or a shared-use path connection. MnDOT is currently developing proposed scoring and selection processes for these types of projects.

## Programs/Projects Not Scored

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The following types of projects and activities will not be scored under the new policy:

- Chip coats, patching and crack sealing of pavements
- Epoxy chip seal wearing courses on bridges
- Painting of bridge steel superstructures
- Bridge expansion joint replacement
- Scour countermeasures
- Sign, signal, lighting and guardrail replacement
- ADA title II complaint resolution requiring capital investment
- Emergency repairs
- Seasonal response (example: fixing winter damage)
- Slope stabilization
- Legal liabilities requiring capital investment
- Landscaping and revegetation following major construction projects
- Striping

Collectively these activities generally account for less than 5 percent of MnDOT's capital construction spending in most years.

## Future Updates and New Programs

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MnDOT will periodically review and revise the criteria and methodology for each project selection process to incorporate new research and guidance, changes in state or federal law, updates to state plans or policies, stakeholder feedback, and lessons learned from implementing the new project selection policy. When changes are made, MnDOT will post the revised criteria and methodology and note how the changes will affect already selected projects.

The project selection policy will apply to all new MnDOT programs that fund state highway construction projects.

## Scoring Details and Methodology

The tables below indicate MnDOT’s proposed criteria and weight of each criterion for each project selection process for the core highway construction program. Additional details for each process and for the specialty and competitive programs are included in the Appendices.

### Pavement

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Pavement projects on National Highway System (NHS) will be scored separately from non-NHS pavements. Pavement projects are scored and selected within each MnDOT district.

#### NHS Pavement Needs

Criteria	Points Available	Data Source / Basis
Timing	60	Forecasted Ride Quality Index
Network Designation	5	Interstate, Non-Interstate Freeway and other NHS
Traffic Volume	10	Annual Average Daily Traffic (AADT)
Truck Volume	10	Heavy Commercial Average Annual Daily Traffic (HCADT)
Length/Miles Covered	5	Roadway miles
Other Infrastructure Needs	10	Condition of pipes under the road

#### Non-NHS Pavement Needs

Criteria	Points Available	Data Source / Basis
Timing	60	Forecasted Ride Quality Index
Traffic Volume	10	AADT
Truck Volume	10	HCADT
Length/Miles Covered	5	Roadway miles
Other Infrastructure Needs	10	Condition of pipes under the road
Turnback Candidate	5	Assessment by district staff

More detailed information and scoring rubrics are included in Appendix C.

## Urban Non-Freeway/Non-Expressway Pavement Needs

Given their complexity, utilities and other infrastructure and level of required local coordination and public involvement, MnDOT will score and prioritize urban non-freeway/non-expressway pavement projects separately from the normal pavement scoring process.

Freeways have full access control (no driveways, signals or at-grade intersections). Expressways have partial access control (limited or no driveways, few and widely spaced intersections, and may include some grade separated crossings). Both are high speed roads designed to facilitate longer trips.

For the purposes of this scoring approach, MnDOT is using a flexible, context-based definition of urban. This includes areas with medium-to-high density adjacent development with small to medium setbacks, and in some instances no setback. This includes both residential, industrial and commercial areas. Presence or lack thereof of curb and gutter or incorporation are not included in this definition. The urban context may only exist for less than a half a mile.

Criteria	Points Available	Data Source / Basis
Timing	25	Forecasted Ride Quality Index
Cracking, Patching and Rutting	25	Surface Rating
MnDOT Utilities	10	Age and condition of utilities
Local Utilities	5	Documented condition issues or community plans
Americans with Disabilities Act (ADA) Compliance	10	ADA Compliance of sidewalks, ramps and signals
Traffic Volume	10	AADT
Active Transportation & Transit	10	Methodology still under development
Environmental Justice	5	Census data

More detailed information and scoring rubrics are included in Appendix D.

## Bridge

### Bridge Needs

Bridges on the National Highway System are scored separately from non-NHS bridges. NHS bridges are scored and prioritized statewide. Non-NHS bridges are scored and prioritized within each district.

Criteria	Points Available	Data Source / Basis
<b>Condition</b>	50	National Bridge Inventory (NBI) deck, superstructure, and substructure ratings as well as fracture critical
<b>Risk of Service Interruption</b>	20	Bridge Planning Index <sup>8</sup>
<b>Remaining Service Life</b>	20	Deck RSL
<b>Bridge Size</b>	10	Deck area

More detailed information and scoring rubrics are included in Appendix E.

### Pedestrian Bridge and Underpass Rehab/Replacement

MnDOT replaces or rehabilitates most pedestrian bridges and underpasses as part of other pavement and bridge projects. However, MnDOT will use the following to score and prioritize standalone projects.

Criteria	Points Available	Data Source / Basis
<b>Condition</b>	65	NBI deck, superstructure, substructure and/or culvert ratings
<b>ADA Compliance</b>	10	ADA compliance of approaches and deck
<b>Proximity to Key Destinations</b>	10	School, parks, stadium, senior residential facility and/or other non-motorized traffic generator within one mile
<b>Environmental Justice / Equity</b>	5	Census data
<b>Functional Classification of Road</b>	5	Access control and speed of road being crossed
<b>Vertical Clearance</b>	5	Minimum 17 feet vertical clearance

More detailed information and scoring rubrics are included in Appendix E.

<sup>8</sup> Minnesota Statutes [165.14 Subd. 7](#) requires MnDOT to include a consideration of the risk of service interruption when prioritizing bridge repairs and replacements. MnDOT developed the Bridge Planning Index to comply with the requirement for a risk-based prioritization system. BPI weighs the risks associated with the condition and fatigue of the bridge structure, potential damage from flooding and trucks, and impacts of detours.



## Major Capacity / Mobility

### Metro Major Capacity Expansions / Mobility Projects

Measure	Points Available	Details/Comments	Policy Source(s)
<b>Consistency with regional plans and studies</b>	25	Priority given in the Met Council’s Transportation Policy Plan and relevant regional planning studies (i.e. principal arterial intersection conversion study, MnPASS system studies, etc.)	SMTP Objective: <b>Open Decision-Making</b>
<b>Return on Investment</b>	25	Benefit-Cost Analysis. Standard benefits in the analysis include: <ul style="list-style-type: none"> <li>• Travel time savings (auto, truck and transit)</li> <li>• Crash reductions</li> <li>• Vehicle operating costs</li> <li>• Vehicle emissions (criteria pollutants and greenhouse gas emissions)</li> </ul>	SMTP Objectives: <b>Transportation Safety, Critical Connections and Healthy Communities</b>
<b>Coordination and Synergy</b>	20	<ul style="list-style-type: none"> <li>• Avoids repeated traffic disruption and detours by building off an already programmed pavement or bridge rehabilitation or replacement project</li> <li>• Coordination with local project(s)</li> <li>• Non-MnDOT funding (i.e. county sales tax funds)</li> </ul>	Minnesota GO Guiding Principles: <b>Leverage Investments to achieve multiple purposes and Use Partnerships</b> SMTP Objective: <b>System Stewardship</b>
<b>Travel Time Reliability</b>	10	Reliability of the affected highway network weighted by person-miles traveled	Minnesota GO Guiding Principle: <b>Emphasize reliable and predictable options</b> SMTP Objective: <b>Critical Connections</b>
<b>Multimodal Benefits/Impacts</b>	10	<ul style="list-style-type: none"> <li>• Impacts on transit services</li> <li>• Impacts on active transportation</li> <li>• Improves access to intermodal terminal or port</li> </ul>	SMTP Objectives: <b>Critical Connections and Healthy Communities</b>
<b>Network Designation</b>	5	Interstate and National Highway System	SMTP Objective: <b>Critical Connections</b>
<b>Truck Route</b>	5	Regional truck corridor tiers	SMTP Objective: <b>Critical Connections</b>

More detailed information is included in Appendix F.

## **Capacity Expansion / Mobility Investments in Greater Minnesota**

A study of mobility issues in Greater Minnesota is currently underway and will identify and prioritize locations for future investment. Based on that study, MnDOT will develop a separate scoring process for projects that improve mobility and travel time reliability in Greater Minnesota.

## Appendices

Appendix A: Bill Language

Appendix B: National Highway System Map

Appendix C: Pavement Scoring

Appendix D: Urban Non-Freeway/Non-Expressway Pavement Scoring

Appendix E: Bridge Scoring

Appendix F: Major Capacity Project Scoring

Appendix G: Specialty and Competitive Program Summaries

- Corridors of Commerce Program
- Highway Freight Program (MHFP)
- Highway Safety Improvement Program (HSIP)
- Historic Roadside Properties Program
- Intelligent Transportation Systems Program (ITS)
- Local Partnership Program (Formerly District Cooperative/Municipal Agreement Programs)
- Stand Alone Noise Barrier Program
- Railway-Highway Crossing Program (Section 130)
- Safety Rest Area Program
- Transportation Economic Development Program (TED)
- Weigh Stations Capital Improvement Program

## Appendix A: Bill Language

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### 2017 Laws of Minnesota, First Special Session, Chapter 3

#### Sec. 124. TRANSPORTATION PROJECT SELECTION PROCESS.

Subdivision 1. **Adoption of policy.** (a) The commissioner of transportation, after consultation with the Federal Highway Administration, metropolitan planning organizations, regional development commissions, area transportation partnerships, local governments, the Metropolitan Council, and transportation stakeholders, must develop, adopt, and implement a policy for project evaluation and selection to apply to the project selection process and to special program selection processes, such as corridors of commerce. The commissioner must adopt and implement the policy no later than November 1, 2018, and may update the policy as appropriate. The commissioner must publish the policy and updates on the department's Web site and through other effective means selected by the commissioner.

(b) For each selection process, the policy adopted under this section must:

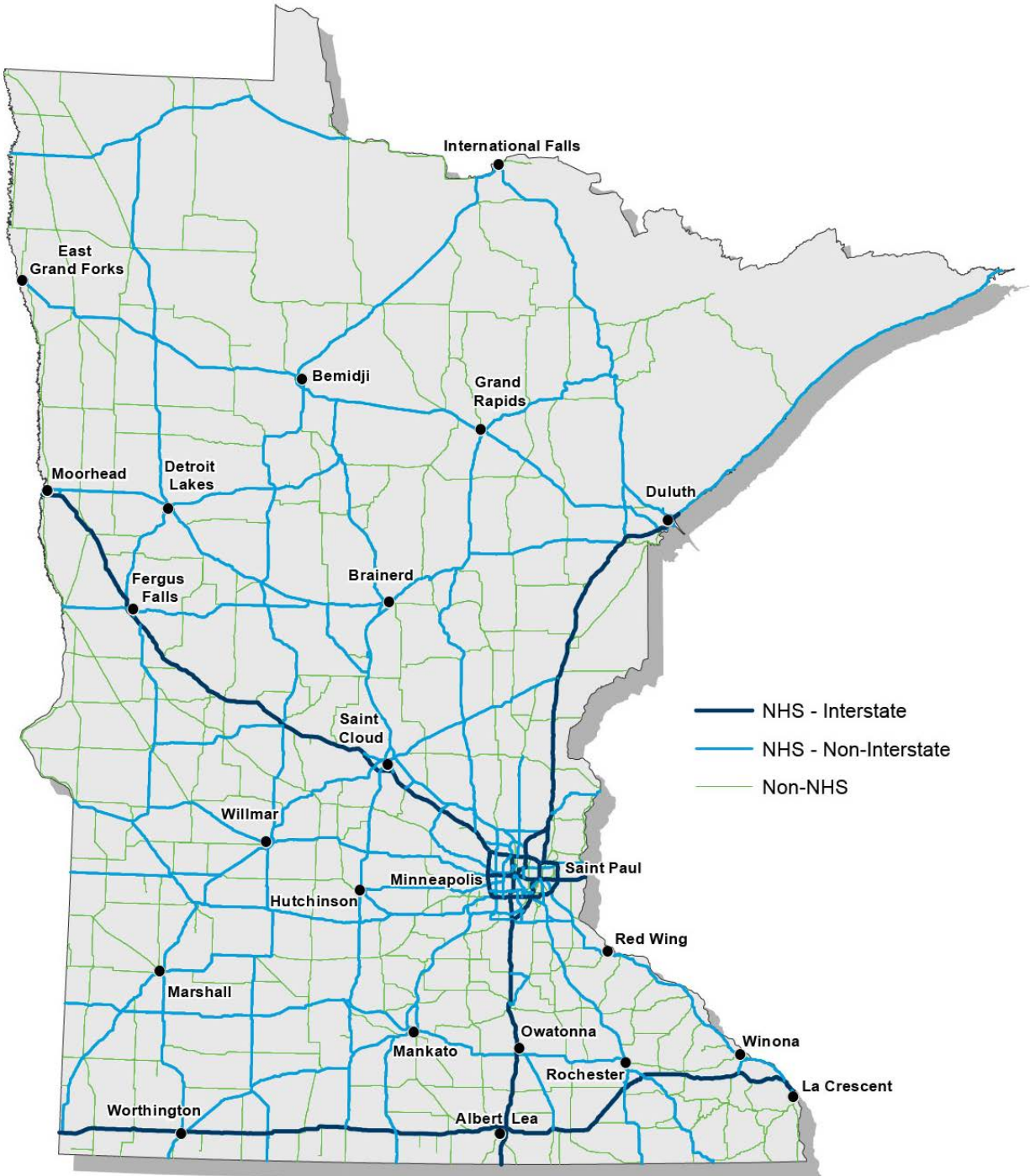
- 1) establish a process that identifies criteria, the weight of each criterion, and a process to score each project based on the weighted criteria; the scoring system may consider project readiness as a criterion for evaluation, but project readiness must not be a major factor in determining the final score;
- 2) identify and apply all relevant criteria contained in enacted Minnesota or federal law, or added by the commissioner;
- 3) identify for stakeholders and the general public the candidate project selected under each selection process and every project considered that was not selected;
- 4) involve area transportation partnerships and other local authorities, as appropriate, in the process of scoring and ranking candidate projects under consideration;
- 5) publicize scoring and decision outcomes concerning each candidate project, including the projects that were considered but not selected, and the reason each project was not selected; and
- 6) require that the projects in the state transportation improvement program include the score assigned to the project.

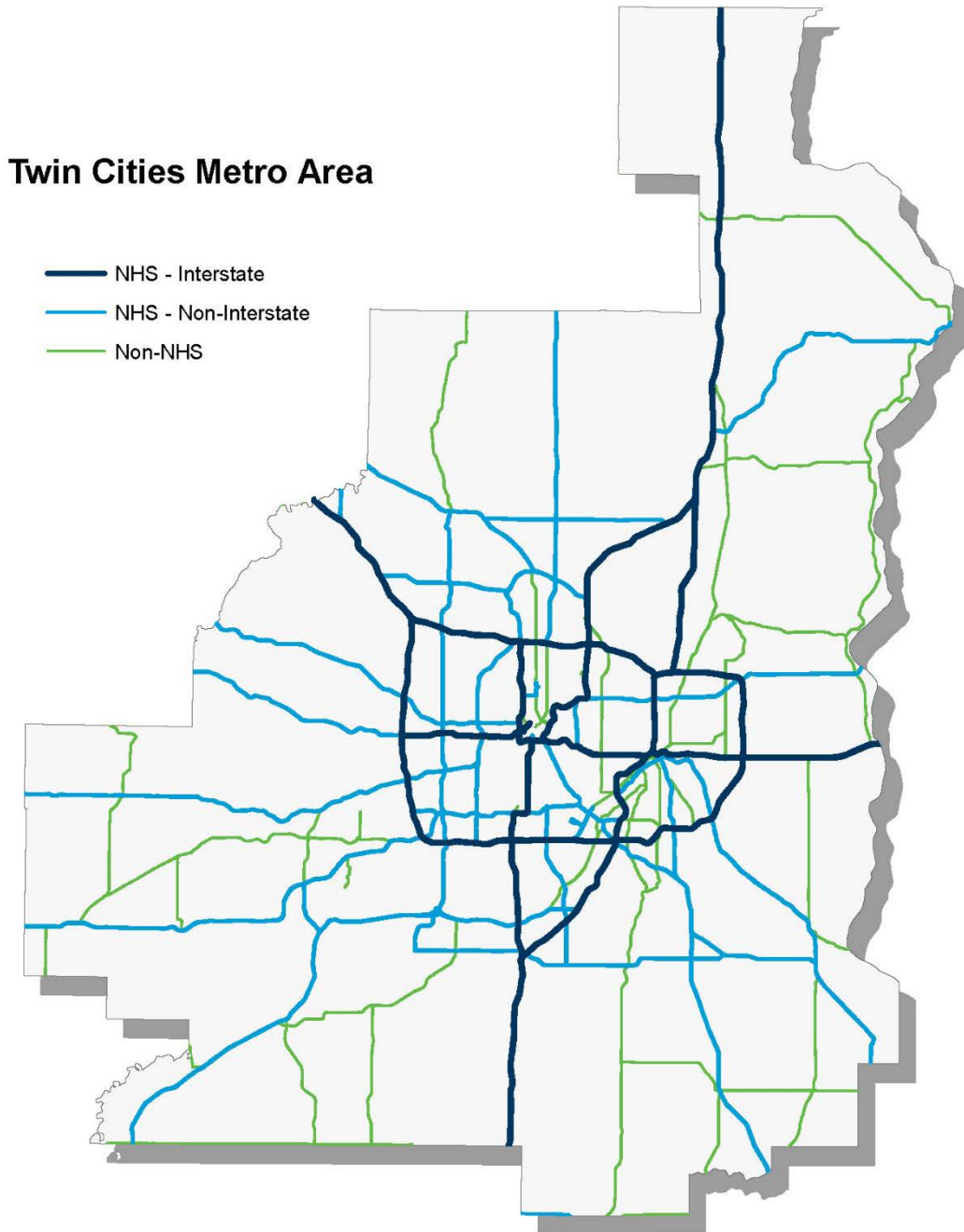
(c) At a minimum, the policy adopted under this subdivision must conform with the criteria for the corridors of commerce program under Minnesota Statutes, section 161.088, and the transportation economic development program under Minnesota Statutes, section 174.12.

Subd. 2. **Report to legislature.** By February 1, 2019, the commissioner must submit a report to the chairs, ranking minority members, and staff of the legislative committees with jurisdiction over transportation policy and finance concerning the adopted policy and how the policy is anticipated to improve the consistency, objectivity, and transparency of the selection process. The report must include information on input from members of the public and the organizations identified in subdivision 1.

## Appendix B: National Highway System Map

Map of the State Highway Network Indicating National Highway System (NHS) Designation





More information about the National Highway System is available at:  
<http://www.dot.state.mn.us/roadway/data/nhs.html>

## Appendix C: Pavement Scoring

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### Scoring Pavement Needs / Selecting Pavement Projects

MnDOT's proposed approach to project selection scores and selects pavement needs at the time they are added to the 10-year Capital Highway Investment Plan. The process to evaluate and scope what goes into those projects would be considered project development and not project selection.

Given their complexity, utilities and other infrastructure and the level of required local coordination and public involvement, urban non-freeway/non-expressway projects will be scored and prioritized separately from the normal pavement scoring process (See Appendix D).

### Project Identification

Potential pavement projects are identified by the Highway Pavement Management Application (HPMA) and by MnDOT district staff.<sup>9</sup>

#### *Projects Requiring Scoring*

Potential projects may be developed for any stretch of road, but at a minimum, potential projects will be developed and scored for all roads with a Ride Quality Index (RQI)<sup>10</sup> forecasted to be 2.5 or lower (Remain Service Life=0)<sup>11</sup> in year 10 of the CHIP being developed.

#### *Preventive Maintenance*

Chip coats, patching and crack sealing will not be scored.

### Scoring Criteria and Weights

Pavement projects on the National Highway System will be scored separately from non-NHS pavements. The amount of funding available for NHS vs. Non-NHS pavement is based on the 20-Year Minnesota State Highway Investment Plan (MnSHIP).

Pavement projects are scored and selected within each district.

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<sup>9</sup> More information about how MnDOT manages pavements is available at:  
<http://www.dot.state.mn.us/materials/pvmtmgmt.html>

<sup>10</sup> MnDOT's statewide performance measures for pavements are based on RQI, which uses a zero to five rating scale to measure the smoothness of driving on a road. Roads with an RQI greater than 3.0 are considered in good condition, between 2.1 and 3.0 in fair condition, and 2.0 or less in poor condition.

<sup>11</sup> When a road has reached the end of its design life it does not mean the road cannot be driven on, but most people would feel it is uncomfortable to drive on and a major rehabilitation is likely needed.

**NHS Pavement Scoring**

Criteria	Points Available	Scoring Rubric
<b>Timing</b>	60	See table below for detailed scoring information
<b>Network Designation</b>	5	Interstate – 5 points Non-Interstate Freeway – 2 points Other NHS – 0 points
<b>Traffic Volume</b>	10	Projects with AADTs equal to or greater than 25,000 in Greater MN and 100,000 in Metro would receive full points.  Below those values, points would be assigned as a percent of those values rounded down to the nearest point.  Example AADT of 14,000 in Greater MN: $14,000/25,000 \times 10$ points = 5.6 points rounded down to 5 points.
<b>Truck Volume</b>	10	Projects with HCADTs equal to or greater than 1,000 in Greater MN and 5,000 in Metro would receive full points.  Below those values, points would be assigned as percent of those values rounded down to the nearest point.
<b>Length/Miles Covered</b>	5	$\leq 10$ roadway miles - $\text{miles}/2 = \text{points}$ (i.e. 4 mile project gets 2 points) – round to the nearest half point  $> 10$ roadway miles - 5 points
<b>Other Infrastructure Needs</b>	10	Number of condition 3 & 4 pipes: $\geq 5$ – 10 points 1-4 – 5 points 0 – 0 points

**Scoring Project Timing**

For the purposes of scoring, MnDOT will use the forecasted RQI for the year anticipated for programming the project. Default is year 10 of the CHIP being developed.

Type of Fix Assumed for Programming Purposes	RQI 0.1-0.5	RQI 0.6-1.0	RQI 1.1-1.5	RQI 1.6-2.0	RQI 2.1-2.5	RQI 2.6-3	RQI>3
<b>Thin Overlay, Diamond Grinding, Minor Concrete Pavement Rehabilitation (CPR)</b>	0 points	0 points	0 points	0 points	25 points	55 points	45 points
<b>Rehab, Medium Mill and Overlay, Major CPR, Thick Overlay</b>	50 points	55 points	60 points	60 points	60 points	50 points	20 points
<b>Reconstruct, Reclaim, Cold In-Place Recycling, Regrade, Unbonded Overlay</b>	60 points	60 points	60 points	60 points	45 points	25 points	0 points



**Non-NHS Pavement Scoring**

Criteria	Points Available	Scoring Rubric
<b>Timing</b>	60	See table above for detailed scoring information
<b>Traffic Volume</b>	10	Projects with AADTs equal to or greater than 5,000 in Greater MN and 25,000 in Metro would receive full points.  Below those values, points would be assigned as a percent of those values rounded down to the nearest point.
<b>Truck Volume</b>	10	Projects with HCADTs equal to or greater than 500 in Greater MN and 1,000 in Metro would receive full points.  Below those values, points would be assigned as percent of those values rounded down to the nearest point.
<b>Length/Miles Covered</b>	5	≤ 10 roadway miles – miles/2 = points - round to the nearest half point > 10 roadway miles - 5 points
<b>Other Infrastructure Needs</b>	10	Number of condition 3 & 4 pipes: ≥5 – 10 points 1-4 – 5 points 0 – 0 points
<b>Turnback Potential</b>	5	Turnback candidate – 5 points

**Factors Not Included in Scoring**

MnDOT considers a wide range of factors when selecting projects. These include considerations specific to individual projects as well as system level performance targets and guidance. Many are not easily quantifiable and will not be included in the score.

**Examples of Reasons Why a High Scoring Project Wouldn't Be Picked**

- Waiting to coordinate with another project
- Cost is greater than total available budget for year
- Waiting to avoid simultaneous or multiple years of detours in the same area
- Project not identified or prioritized in the metropolitan transportation plan or studies (for projects within MPO planning areas)

**Examples of Reasons Why a Lower Scoring Project Would Be Picked**

- RQI forecast doesn't reflect on the ground conditions or expectations
- Ongoing maintenance concerns
- To coordinate with the timing of another MnDOT or local project

## Appendix D: Urban Non-Freeway/Non-Expressway Pavement Scoring

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### Scoring Urban Pavement Needs / Selecting Pavement Projects

MnDOT's proposed approach to project selection scores and selects pavement needs at the time they are added to the 10-year Capital Highway Investment Plan. The process to evaluate and scope what goes into those projects would be considered project development and not project selection. Given their complexity, utilities and other infrastructure and required local coordination and public involvement, urban non-freeway/non-expressway pavement projects will be scored and prioritized separately from the normal pavement scoring process.

Freeways have full access control (no driveways, signals or at-grade intersections). Expressways have partial access control (limited or no driveways, few and widely spaced intersections, and may include some grade separated crossings). Both are high speed roads designed to facilitate longer trips.

#### ***Definition of Urban***

For the purposes of scoring urban pavement needs, MnDOT proposes using a flexible, context-based definition of urban. This includes areas with medium-to-high density adjacent development with small to medium setbacks, and in some instances no setback. This includes both residential, industrial and commercial areas. Presence or lack thereof of curb and gutter or incorporation are not included in this definition. The urban context may only exist for less than a half a mile.

Freeways and expressways are not included in this scoring selection process.

#### **Project Identification**

Potential urban pavement projects are identified by the Highway Pavement Management Application (HPMA) decision tree and by district staff.

#### ***Projects Requiring Scoring***

Potential projects may be developed for any stretch of urban road, but at a minimum, potential projects will be developed and scored for all roads with RQIs forecasted to be 2.5 or lower (Remain Service Life=0) and a Surface Rating (SR) of 3.0 or less in year 10 of the CHIP being developed. RQI alone is less reliable in urban areas as the measure is based on higher speed roads (>50 miles per hour) and may overestimate the need for pavement rehabilitation or replacement.

#### ***Preventive Maintenance***

Chip coats, patching and crack sealing will not be scored.

## Scoring Criteria and Weights

Pavement projects are scored and selected within each district.

Criteria	Available Points	Scoring Rubric
<b>Timing</b>	25	<i>See table below for details</i>
<b>Cracking, Patching &amp; Rutting</b>	25	Surface Rating: <2.1 – 25 points 2.1-2.4 – 20 points 2.5-3.0 – 10 points >3.0 – 0 points
<b>MnDOT Utilities</b>	10	Age/Condition: ≥70 years and/or documented condition issues – 10 points ≥60 years – 8 points ≥50 years – 5 points ≥40 years – 2 points <40 years – 0 points
<b>Local Utilities</b>	5	Documented local utility need and/or cast iron or clay tile pipes – 5 points
<b>ADA<sup>12</sup></b>	10	Documented ADA non-compliant sidewalk, curbs and/or signals – 10 points  Substantially, but not fully compliant and/or previous investments have been made to address ADA, but PROWAG has changed the geometric requirements since then – 5 points
<b>Traffic Volume</b>	10	Projects with AADTs equal to or greater than 10,000 in Greater MN and 25,000 in Metro would receive full points.  Below those values, points would be assigned as a percent of those values rounded down to the nearest point.  Example AADT of 14,000 in Metro: $14,000/25,000 \times 10$ points = 5.6 points rounded down to 5 points.
<b>Active Transportation and Transit</b>	10	<i>Still under development</i>
<b>Environmental Justice</b>	5	Adjacent census tracts have more than 30% EJ population in Metro and more than 20% in Greater MN

<sup>12</sup> MnDOT’s plan is to make the entire state highway system substantially compliant with ADA by the end of the current MnSHIP (2037).

**Scoring Project Timing**

For the purposes of scoring, MnDOT will use the forecasted RQI for the year anticipated for programming the project. Default is year 10 of the CHIP being developed.

Type of Fix Assumed for Programming Purposes	RQI 0.1-0.5	RQI 0.6-1.0	RQI 1.1-1.5	RQI 1.6-2.0	RQI 2.1-2.5	RQI 2.6-3.0	RQI >3.0
Thin Overlay, Diamond Grinding, Minor Concrete Pavement Rehabilitation (CPR)	0 points	0 points	0 points	0 points	15 points	20 points	5 points
Rehab, Medium Mill and Overlay, Major CPR, Thick Overlay	20 points	20 points	25 points	25 points	25 points	20 points	5 points
Reconstruct, Reclaim, Cold In-Place Recycling, Regrade, Unbonded Overlay	25 points	25 points	25 points	25 points	20 points	10 points	0 points

**Factors Not Included in Scoring**

MnDOT considers a wide range of factors when selecting projects. These include considerations specific to individual projects as well as system level performance targets and guidance. Many are not easily quantifiable and will not be included in the score.

**Examples of Reasons Why a High Scoring Project Wouldn't Be Picked**

- Cost is greater than total available budget for year
- City not ready to participate at this time
- Project not identified or prioritized in the metropolitan transportation plan or studies (for projects within MPO planning areas)
- Significant environmental process needs to be completed or more work needed to identify and resolve environmental constraints

**Examples of Reasons Why a Lower Scoring Project Would Be Picked**

- City has funding for a specific year
- Turnback agreement in place
- Ongoing maintenance concerns

## Appendix E: Bridge Scoring

### Scoring Bridge Needs / Selecting Bridge Projects

MnDOT’s proposed approach to project selection scores and selects bridge needs at the time they are added to the 10-year Capital Highway Investment Plan (CHIP). The process to evaluate and scope what goes into those projects would be considered project development and not project selection.

### Project Identification

Potential bridge projects are identified by MnDOT’s Bridge Replacement and Improvement Management System (BRIM).<sup>13</sup>

### Projects Requiring Scoring

Potential projects will be developed and scored for all bridges: A) identified by BRIM and expert review for an action within the time period covered by the CHIP under development, and B) with deck, substructure or superstructure National Bridge Inventory (NBI) ratings<sup>14</sup> based on the following table.

Recommended Action from BRIM and Expert Review	Deck NBI Rating	Superstructure or Substructure NBI Rating
Overlay Deck	≤7	N/A
Replace Deck	≤6	≤5
Rehabilitation <sup>15</sup> or Replacement	≤6	≤5

### Bridge Preventive and Reactive Maintenance

Epoxy chip seal wearing courses, painting of steel superstructures, expansion joint replacement, scour countermeasures, etc. will not be scored, but will be considered for the CHIP based on the condition of the element receiving the action.

<sup>13</sup> More information about how MnDOT manages bridges is available at: <http://www.dot.state.mn.us/bridge/>

<sup>14</sup> NBI condition ratings measure the general condition of a bridge on a 1 to 9 scale. Ratings of 7 or higher are considered good condition, 5 and 6 are considered fair and satisfactory, and 4 or less considered poor or serious.

<sup>15</sup> Rehabilitation includes superstructure replacement or widening and other activities as identified in Chapter 6 of the Bridge Preservation and Improvement Guidelines: <http://www.dot.state.mn.us/bridge/construction.html>.

## Scoring Criteria and Weights

Bridges on the National Highway System are scored separately from non-NHS bridges. The amount of funding available for NHS vs. Non-NHS bridges is based on the 20-Year Minnesota State Highway Investment Plan.

NHS bridges are scored and prioritized statewide. Non-NHS bridges are scored and prioritized within each district.

### Bridge Scoring

Criteria	Points Available	Scoring Rubric for Re-decks, Rehabilitations and Replacements	Scoring Rubric for Overlays
<b>Condition</b>	50	NBI Deck, Superstructure, or Substructure Rating: ≤4 – 50 points =5 and/or fracture critical – 35 points	NBI Deck Rating: ≤6 – 50 points =7 – 30 points
<b>Risk of Service Interruption</b>	20	Bridge Planning Index (BPI): <sup>16</sup> ≤60 – 20 points 61-80 – 10 points >80 – 0 points	BPI: ≤60 – 20 points 61-80 – 10 points >80 – 0 points
<b>Remaining Service Life</b>	20	Deck RSL: ≤10 years – 20 points 11-15 years – 10 points >15 years – 0 points	Deck RSL: ≤20 years – 20 points 21-30 years – 10 points >30 years – 0 points
<b>Bridge Size</b>	10	Deck Area: ≥100,000 ft <sup>2</sup> = 10 points 90,000-99,999 ft <sup>2</sup> = 9 points 80,000-89,999 ft <sup>2</sup> = 8 points 70,000-79,999 ft <sup>2</sup> = 7 points 60,000-69,999 ft <sup>2</sup> = 6 points 50,000-59,999 ft <sup>2</sup> = 5 points <50,000 ft <sup>2</sup> = 0	Deck Area: ≥100,000 ft <sup>2</sup> and/or span length ≥ 250 feet = 10 points 90,000-99,999 ft <sup>2</sup> = 9 points 80,000-89,999 ft <sup>2</sup> = 8 points 70,000-79,999 ft <sup>2</sup> = 7 points 60,000-69,999 ft <sup>2</sup> = 6 points 50,000-59,999 ft <sup>2</sup> = 5 points <50,000 ft <sup>2</sup> = 0

### Scoring Multiple Bridge Structures

Projects involving significant work on twin bridge structures or other situations with more than one bridge, the score of the primary bridge driving the project will be the score for the overall project.

<sup>16</sup> Minnesota Statutes [165.14 Subd. 7](#) requires MnDOT to include a consideration of the risk of service interruption when prioritizing bridge repairs and replacements. MnDOT developed the Bridge Planning Index to comply with the requirement for a risk-based prioritization system. BPI weighs the risks associated with the condition and fatigue of the bridge structure, potential damage from flooding and trucks, and impacts of detours.

**Scoring Pedestrian & Bicycle Bridge/Underpass Rehab/Replacement**

Criteria	Points Available	Scoring Rubric
<b>Condition</b>	65	NBI deck, substructure, superstructure or culvert rating: ≤4 – 65 points 5 – 30 of points
<b>ADA Compliance</b>	10	Approaches and/or deck not ADA compliant – 10 points
<b>Proximity to key destinations</b>	10	School, parks, stadium, senior residential facility and/or other non-motorized traffic generator: w/in ¼ mile – 10 points w/in ½ mile – 7.5 points w/in 1 mile – 5 points
<b>Environmental Justice</b>	5	More than 30% of the population in Metro and more than 20% of the population in Greater MN adjacent census tracts are covered by the Environmental Justice Executive Order
<b>Functional Classification of Road</b>	5	Freeway – 5 points Non-Freeway ≥45mph – 3 points
<b>Low vertical clearance</b>	5	< 17 feet – 5 points

MnDOT is not currently developing new pedestrian bridges as standalone projects other than those that are locally initiated and funded. However, if that changes, potential additional criteria could include:

- Pedestrian and bicyclist counts
- Distance to the next safe and/or legal crossing
- Speed and traffic volume of the road being bridged

**Other Types of Bridge Projects**

Although rare, MnDOT occasionally selects other types of standalone projects MnDOT categorizes as bridges. MnDOT still needs to develop project scoring rubrics for the following types of projects:

- Culverts
- Tunnels
- Bridges over state highways carrying railroads

## Factors Not Included in Scoring

MnDOT considers a wide range of factors when selecting projects. These include considerations specific to individual projects as well as system level performance targets and guidance. Many are not easily quantifiable and will not be included in the score.

### ***Examples of Reasons Why a High Scoring Project Wouldn't Be Picked***

- Waiting to coordinate with another project
- Cost is greater than total available budget for year
- Waiting to avoid simultaneous or multiple years of detours in the same area
- Project not identified or prioritized in the metropolitan transportation plan or studies (for projects within MPO planning areas)

### ***Examples of Reasons Why a Lower Scoring Project Would Be Picked***

- Bridge is currently load posted
- To prepare for a future pavement or capacity expansion
- Ongoing maintenance concerns
- To coordinate with the timing of another MnDOT or local project



## Appendix F: Major Capacity Project Scoring

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### Scoring Major Capacity Expansion Projects in the Twin Cities

MnDOT's proposed approach to project selection scores and selects pavement and bridge needs at the time they are added to the 10-year Capital Highway Investment Plan. The process to evaluate and scope what goes into those projects would be considered project development and not project selection.

However, some projects do significantly more than asset management and require special scoring and consideration given their size, visibility and impact to the system. This document outlines MnDOT's proposed approach for scoring capacity expansion / mobility projects.

This proposed approach applies to the Minneapolis-St. Paul metropolitan area and relies heavily on regionally specific planning efforts. A study is currently underway that will identify and prioritize locations for future mobility investments in Greater Minnesota. Based on that study, a separate scoring system will be developed.

### Project Identification and Eligibility

#### *Projects Requiring Scoring*

The following types of projects would need to be scored to be programmed in either the CHIP or STIP:

- The addition of 1 lane mile or more (MnPASS, general purpose or auxiliary)
- New or significantly modified interchanges
- Any project requiring an Environmental Assessment or full Environmental Impact Statement
- Any project that includes a capacity expansion element costing \$10 million or more (the cost of the capacity is \$10 million, not the total project cost)

Smaller improvements (costing less than \$10 million) identified through the Congestion Management Safety Plans would not need to be scored if delivered as part of a pavement or bridge project.

Projects initiated by cities and counties on the trunk highway system meeting one of the criteria above that receive funding through the regional solicitation, Transportation Economic Development Program, or federal competitive programs like TIGER/INFRA/BUILD, would not need to be scored to receive MnDOT match funds. They would be considered selected through that competitive process.

#### *Qualifying Criteria*

In order to be selected, potential major capacity projects would also need the following two criteria to be true:

1. The location has existing, sustained congestion of at least one hour during peak periods.
2. The project has been identified in the Metropolitan Council's current Transportation Policy Plan or a supplemental planning study that's part of the regional planning process.

Stakeholder requests for capacity expansion that do not meet both criteria would not be eligible, but could compete in the Corridors of Commerce and Transportation Economic Development programs.

## Scoring Criteria and Weights

Measure	Points Available	Details/Comments	Policy Source(s)
<b>Consistency with regional plans and studies</b>	25	Priority given in the Met Council’s Transportation Policy Plan and relevant regional planning studies (i.e. principal arterial intersection conversion study, MnPASS system studies, etc.)	SMTTP Objective: <b>Open Decision-Making</b>
<b>Return on Investment</b>	25	Benefit-Cost Analysis. <sup>17</sup> Standard benefits in the analysis include: <ul style="list-style-type: none"> <li>• Travel time savings (auto, truck and transit)</li> <li>• Crash reductions</li> <li>• Vehicle operating costs</li> <li>• Vehicle emissions (criteria pollutants and GHG emissions)</li> </ul>	SMTTP Objectives: <b>Transportation Safety, Critical Connections and Healthy Communities</b>
<b>Coordination and Synergy</b>	20	<ul style="list-style-type: none"> <li>• Avoids repeated traffic disruption and detours by building off an already programmed pavement or bridge rehabilitation or replacement project</li> <li>• Coordination with local project(s)</li> <li>• Non-MnDOT funding (i.e. county sales tax funds)</li> </ul>	Minnesota GO Guiding Principles: <b>Leverage Investments to achieve multiple purposes and Use Partnerships</b>  SMTTP Objective: <b>System Stewardship</b>
<b>Travel Time Reliability</b>	10	Reliability of the affected highway network weighted by person-miles traveled	Minnesota GO Guiding Principle: <b>Emphasize reliable and predictable options</b>  SMTTP Objective: <b>Critical Connections</b>
<b>Multimodal Benefits/Impacts</b>	10	<ul style="list-style-type: none"> <li>• Impacts on transit services</li> <li>• Impacts on active transportation</li> <li>• Improves access to intermodal terminal or port</li> </ul>	SMTTP Objectives: <b>Critical Connections and Healthy Communities</b>
<b>Network Designation</b>	5	Interstate and National Highway System	SMTTP Objective: <b>Critical Connections</b>
<b>Truck Route</b>	5	Regional truck corridor tiers	SMTTP Objective: <b>Critical Connections</b>

<sup>17</sup> More information about how MnDOT conducts transportation benefit-cost analysis is available at: <http://www.dot.state.mn.us/planning/program/benefitcost.html>

**Scoring Details**

Measure	Points Available	Scoring Rubric
<b>Consistency with regional plans and studies</b>	25	<p>Priority given in the Met Council’s Transportation Policy Plan and relevant regional planning studies. Examples:</p> <p>Principal Arterial Intersection Conversion Study:                      Tier 1 – 25 points                      Tier 2 – 10 points</p> <p>MnPASS System Study                      Tier 1 or 2 – 25 points                      Tier 3 – 15 points</p>
<b>Return on Investment</b>	25	<p>Benefit-Cost Ratio:                      &lt;1 – 0 points                      1.0-1.49 – 10 points                      1.5-1.99 – 15 points                      2.0-2.99 – 20 points                      ≥3.0 – 25 points</p>
<b>Coordination and Synergy</b>	20	<p>Coordinated with an asset management project – 20 points                      or Coordinated with a local project – 15 points                      or Non-MnDOT funding:                      &gt;20% - 10 points                      &gt;30% - 15 points                      &gt;40% - 20 points</p>
<b>Travel Time Reliability</b>	10	<p>Volume/Occupancy Weighted Travel Time Reliability Index (80<sup>th</sup> percentile / 50<sup>th</sup> percentile):                      ≥ 1.5 – 5 points                      ≥ 2.0 – 10 points</p>
<b>Multimodal Benefits/Impacts</b>	10	<p><i>Details still under development, but will consider impacts on transit services and active transportation as well as access to intermodal terminal or port or other major freight generator</i></p>
<b>Network Designation</b>	5	<p>Interstate – 5 points                      Non-Interstate NHS – 3 points                      Non-NHS – 0 points</p>
<b>Truck Route</b>	5	<p>Regional truck corridor tiers:                      Tier 1 – 5 points                      Tier 2 – 3 points                      Tier 3 – 1 point</p>

## Scope Changes That Require Rescoring

Most scoping decisions for capacity projects would not require rescoring, but the following thresholds would require an updated score:

- Cost of capacity expansion element(s) increases by more than 20 percent
- The scope changes would likely meaningfully change the benefit-cost ratio (i.e. change in travel time savings or safety benefits great enough to affect the benefit-cost ratio rounded to the nearest whole number).
- The nature of the project changes (i.e. switching from a MnPASS lane to a general purpose lane)

## Appendix G: Specialty / Competitive Program Summaries

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MnDOT manages a variety of special programs with specific objectives. The following programs will be covered by the new project selection policy:

- Corridors of Commerce Program
- Highway Freight Program (MHFP)
- Highway Safety Improvement Program (HSIP)
- Historic Roadside Properties Program
- Intelligent Transportation Systems Program (ITS)
- Local Partnership Program (Formerly District Cooperative/Municipal Agreement Programs)
- Railway-Highway Crossing Program (Section 130)
- Safety Rest Area Program
- Stand Alone Noise Barrier Program
- Transportation Economic Development Program (TED)
- Weigh Stations Capital Improvement Program

This appendix provides a short summary of each program.

## Corridors of Commerce Program

### ***Purpose***

The Corridors of Commerce program funds the construction, reconstruction and improvement of state highways in support of the following goals:

- Provide additional highway capacity on segments where there are currently bottlenecks in the system
- Improve the movement of freight and reduce barriers to commerce

### **Quick Facts**

<b>Topic</b>	<b>Detail</b>
Statutory reference(s)	Minnesota Statutes <a href="#">161.088</a>
Frequency of project selection	Whenever funding is allocated by the MN Legislature
Approximate annual funding	\$25-\$200 million
Funding Source	State Funds
How many years before construction are projects selected	1 to 5 years

### ***Where do potential project ideas come from?***

Project recommendations are submitted by public sector partners, stakeholders and interested citizens statewide. MnDOT itself does not submit project recommendations for scoring consideration.

### ***Criteria Used in Project Selection***

MnDOT scores projects on seven of the eight legislatively mandated criteria, with each being worth 100 points.

- Return on Investment
- Economic Impact
- Freight Efficiency
- Safety Improvements
- Regional Connections
- Policy Objectives
- Community Consensus

The eighth criteria, Regional Balance, is applied as a funding split after all projects have been scored and ranked. MnDOT uses a soft 50-50 split between the two geographic regions of the Metro Area and Greater Minnesota to award the funding. A soft split means the regions each receive approximately half the funding, but it may not be exactly 50 percent.

### ***Other Information***

#### Project Eligibility:

- Projects must either develop additional system capacity or demonstrate improvement for freight movement (reduce bottlenecks).
- Projects must be consistent with the Statewide Multimodal Transportation Plan.
- Projects must be able to begin within four years of award of funding. (Construction start may be delayed beyond 4-years in order to avoid significant traveling public impacts from having parallel routes in the same region under construction at the same time.)
- Projects must be on the Interregional Corridor Network, including the supplemental freight routes, in Greater Minnesota or any state highway in the eight-county MnDOT Metropolitan District.
- The amount of corridors of commerce funding needed to construct the project (including construction cost, right-of-way, & engineering) cannot exceed the amount of funding available.
- An identical project cannot already be listed in the STIP, but it may be listed in the CHIP.

<https://www.dot.state.mn.us/corridorsofcommerce>

## Minnesota Highway Freight Program

### ***Purpose***

The Minnesota Highway Freight Program (MHFP) provides funding to construction projects on public roads that provide measurable freight transportation benefits. The program was created by the federal Fixing America’s Surface Transportation (FAST) Act.

### **Quick Facts**

Topic	Detail
Statutory reference(s)	<a href="#">23 U.S. Code Section 167</a>
Frequency of project selection	<i>To be determined</i>
Approximate annual funding	\$20 million
Funding Source	Federal
How many years before construction are projects selected	2 to 5 years

### ***Where do potential project ideas come from?***

Project proposals are solicited from cities, counties, MnDOT districts and other road authorities for three categories of projects: safety, congestion/efficiency improvements, and first/last mile connections.

### ***Criteria Used in Project Selection***

Criteria	Points Available for Safety Projects	Points Available for Freight Congestion/ Freight Efficiency Improvement Projects	Points Available for First/ Last Mile Projects
Truck Volume	250	250	250
Safety	350	100	100
Travel Time Reliability	100	350	150
Facility Access	+50*	+50*	200
Cost-Effectiveness	150	150	150
Project Readiness	150	150	150

\*Bonus points

### ***Other Information***

<http://www.dot.state.mn.us/ofrw/mhfp/index.html>



## Highway Safety Improvement Program

### Purpose

The Highway Safety Improvement Program (HSIP) funds cost effective construction projects that reduce traffic fatalities and serious injuries on all public roads. MnDOT administers two HSIP programs: one focused on safety improvements to local roads and a second focused on safety improvements to state highways. 60 percent of HSIP funding goes to local roads.

This summary only applies to the state highway program.

### Quick Facts

Topic	Detail
Statutory reference(s)	<a href="#">23 U.S. Code Section 148</a>
Frequency of project selection	Annual
Approximate annual funding	\$8-12 million
Funding Source	Federal
How many years before construction are projects selected	2 to 4 years

### *Where do potential project ideas come from?*

Project proposals are solicited from MnDOT districts. Most projects are originally identified in a district or county safety plan or an analysis of fatal and serious injury crashes on the state highway network.

### *Criteria Used in Project Selection*

The HSIP program is revising the criteria that will be used in future project selection, which may include:

- Identification in a plan
- Number of sites/miles covered
- Risk rating
- Expected reduction in fatal and serious injury crashes
- Treatment effectiveness
- Cost effectiveness

### *Other Information*

<http://www.dot.state.mn.us/trafficeng/safety/hsip.html>

## Historic Roadside Properties Program

### *Purpose*

The Historic Roadside Properties Program funds the repair, rehabilitation and preservation of roadside properties that are either listed on, or eligible for, the National Register of Historic Places.



### Quick Facts

Topic	Detail
Federal Law	National Preservation Act of 1966 (amended as 16USC 470 et seq.), Section 106, Section 110; National Environmental Policy Act of 1969, as amended (42 USC 4321, and 4331-4335); Archaeological and Historic Preservation Act of 1974, as amended (16 USC 469-469c-2)
Statutory reference(s)	Minnesota Statutes <a href="#">138-</a>
Frequency of project selection	Annual
Approximate annual funding	\$2 million
Funding Source	Federal and State
How many years before construction are projects selected	2 years

### *Where do potential project ideas come from?*

Eligible projects were identified by a cultural resources study of historic roadside development properties conducted in 1996-1998 by Gemini Research for MnDOT. The study identified 102 MnDOT properties, of which 56 are either listed on, or eligible for, the National Register of Historic Places.

### ***Criteria Used in Project Selection***

- National Register Eligibility
- Historical Significance:
  - Associated with a New Deal Program
  - Significant Historical Event or Pattern
  - Outstanding Scenic Value
- Design Significance:
  - Important Designer
  - Quality of Landscape Design
  - Quality of Structure(s) Design
  - Quality of Craftsmanship
- Integrity of the Site (degree of alteration)
- Integrity of the Setting

### ***Other Information***

Although the sites have been ranked according to historic significance, other factors are also considered. For example:

1. It is not unusual for historic structures located close to the roadway to be struck by vehicles. In these cases, the historic property will be repaired as soon as possible under program guidelines.
2. Occasionally a property will be found to be deteriorating at a faster rate than anticipated and we must move forward to repair it in order to avoid losing the structure.
3. Local Government agencies or individuals will request that a structure located close to their municipality be restored.

In each of these cases, it is likely that the priority projects will be put on hold in order to act as quickly as possible on these out of sequence sites.

[www.dot.state.mn.us/roadsides/historic/index.html](http://www.dot.state.mn.us/roadsides/historic/index.html)

## Intelligent Transportation Systems

### ***Purpose***

The Intelligent Transportation Systems (ITS) program funds the installation of new or upgrade of existing electronics, communications, or information processing systems or services to improve the efficiency and safety of the state highway system.



### **Quick Facts**

Topic	Detail
Frequency of project selection	Annual
Approximate annual funding	\$1.9 million
Funding Source	Federal and State
How many years before construction are projects selected	3 to 4 years

### ***Where do potential project ideas come from?***

MnDOT districts providing project requests to the MnDOT Office of Traffic, Safety and Technology.

### ***Criteria Used in Project Selection***

- Addresses a documented need
- Meets warrants for ITS
- Consistent with or advances MnDOT’s ITS plan and program
- Uses proven technology
- Maintenance and operations plan developed
- Project deliverability

### ***Other Information***

<http://www.dot.state.mn.us/its/>

## Local Partnership Program

### ***Purpose***

The Local Partnership Program (formerly known as Municipal Agreements or Cooperative Agreements) funds locally identified improvements to state highways, particularly locations where the local transportation network intersects with the state system.

### **Quick Facts**

Topic	Detail
Frequency of project selection	Annual
Approximate annual funding	\$6-12 million
Funding Source	State
How many years before construction are projects selected	1 to 2 years

### ***Where do potential project ideas come from?***

Project ideas come from city and county agencies.

### ***Criteria Used in Project Selection***

A revised project selection process is currently being developed. Potential scoring criteria include:

- Infrastructure condition
- Congestion management
- Access management
- Crash reduction and safety improvements
- Geometric improvements

### ***Other Information***

More information about the revised program will be available in the summer of 2018.

## Railway-Highway Crossings (Section 130) Program

### ***Purpose***

The Railway-Highway Crossings (Section 130) Program funds the elimination of hazards at railway-highway crossings, including the closure and consolidation of crossings, replacement of antiquated equipment, and new grade crossing controls.



### **Quick Facts**

Topic	Detail
Statutory reference(s)	<a href="#">23 U.S. Code Section 130</a>
Frequency of project selection	Annual, potentially every other year
Approximate annual funding	\$6 million
Funding Source	Federal and State
How many years before construction are projects selected	2 to 4 years

### ***Where do potential project ideas come from?***

Projects are solicited annually from local road authorities, railroads and MnDOT districts.

### ***Criteria Used in Project Selection***

Section 130 Grade Crossing projects have been broken into three project types with their own scoring criteria: closures/consolidations, antiquated equipment and grade crossing control.

Closures/consolidation criteria:

1. Screen based upon:
  - Meet Criteria Minnesota Rules 8830.2740
  - Project readiness
2. Scoring criteria:
  - Number of crossings closed
  - Risk Factors
  - Deficient Geometry

Antiquated Equipment Criteria:

1. Screen based on:
  - Minimum 15 years in operation
  - Goal is to balance funding 50%-50% between Class 1 and the Class 2 and 3 railroads
2. Scoring criteria:
  - Railroad Priority
  - Exposure
  - Cost participation over required minimum 10%

Grade Crossing Control Criteria:

1. Screen based upon:
  - Risk Factors = 7 or more
2. Scoring criteria:
  - Local road authority funding priority
  - Magnitude of clearing sight distance restriction
  - Exposure
  - Crossing density less than 5 per mile
  - Cost participation over required minimum 10%

***Other Information***

The Railway-Highway Crossings (Section 130) Program has been correlated with a significant decrease in fatalities at railway-highway grade crossings. Since the Program's inception in 1987 through 2014, for which most recent data is available, fatalities at these crossings have decreased by 57 percent. The overall reductions in fatalities come despite an increase in the vehicle miles traveled on roadways and an increase in the passenger and freight traffic on the railways.

<http://www.dot.state.mn.us/ofrw/railroad/safety.html>

## Safety Rest Area Program

### *Purpose*

MnDOT's Safety Rest Area Program funds construction, repair and rehabilitation of rest areas and waysides. Rest areas support commercial freight movements, serve as a countermeasure to drowsy driving, and promote state and regional tourism as well as providing convenient time-saving services for travelers.



### Quick Facts

Topic	Detail
Statutory reference(s)	Minnesota Statutes <a href="#">86A.04</a> , <a href="#">86A.05</a> , <a href="#">86A.07</a> , <a href="#">160.272</a> , <a href="#">160.2721</a> , <a href="#">160.2725</a> , <a href="#">160.2735</a> , <a href="#">160.274</a> , <a href="#">160.2745</a> , <a href="#">160.276</a> , <a href="#">160.28</a> , and <a href="#">160.282</a>
Frequency of project selection	Every other year
Approximate annual funding	\$2-6 million
Funding Source	Federal
How many years before construction are projects selected	4 to 8 years

### *Where do potential project ideas come from?*

MnDOT Rest Area Program identifies capital investment candidate projects based on the physical condition of rest area buildings and pavements, accessibility and building code compliance, partnership potential and availability of alternative funding sources.

MnDOT Districts also identify rest area capital investment projects. These typically focus on the physical condition of rest area vehicular pavements and ramps. These projects typically use one-time funding.



**Criteria Used in Project Selection**

Criteria	Percent of Score
Physical Condition (Facility Condition Assessment): <ul style="list-style-type: none"><li>▪ Building</li><li>▪ Vehicular Pavements</li></ul>	TBD
Accessibility and Building Code Deficiencies	TBD
Partnership Potential	TBD
Availability of Alternative Funding Source	TBD

**Other Information**

[www.dot.state.mn.us/restareas](http://www.dot.state.mn.us/restareas)

## Standalone Noise Barrier Program

### *Purpose*

The Standalone Noise Barrier Program provides funding for construction of noise barriers along state highways in areas where no noise abatement measures currently exist and no major construction projects are currently programmed.



### Quick Facts

Topic	Detail
Statutory reference(s)	Minnesota Statutes <a href="#">161.125</a>
Frequency of project selection	Annual
Approximate annual funding	\$2 million (Metro) \$1 million (Greater Minnesota)
Funding Source	State Funds
How many years before construction are projects selected?	4 to 5 years

### *Where do potential project ideas come from?*

In the Metro, MnDOT maintains a ranked list of areas where state and federal residential noise standards are exceeded. Areas that are ranked at the top of the list are given the opportunity to pursue a noise barrier project based on interest from the city where the noise barrier is proposed and its affected residents. If the city is not interested in pursuing the project, that location is dropped from the ranking list. The ranking list is updated every five years.

For standalone noise barriers in Greater Minnesota, MnDOT uses a solicitation to select standalone noise barrier projects. Interested cities apply for funding and provide information about the area where a noise barrier is being requested. MnDOT then conducts noise analysis and ranks the applications. The top ranking noise barrier project(s) is then programmed into the STIP.

***Criteria Used in Project Selection***

- Are residential units located in an incorporated area?
- Were the majority of residential units constructed prior to 1997 (date of legislation)?
- Existing noise levels
- Number of homes adjacent to highway
- Cost effectiveness of noise barrier (cost of barrier divided by the number of residential units that receive at least 5 decibels of noise reduction from the barrier)

***Other Information***

Both Metro and Greater Minnesota standalone noise barrier projects require a 10 percent cost share from the city where the noise wall is being proposed.

Any noise barriers constructed under this program must meet the criteria for feasibility, reasonableness, and cost effectiveness identified in the MnDOT's 2017 Noise Requirements:

<http://www.dot.state.mn.us/environment/noise/policy/index.html>

MnDOT Metro Standalone Noise Barrier Study:

<http://www.dot.state.mn.us/environment/noise/pdf/2016-hwy-noise-abatement-study.pdf>

MnDOT Greater Minnesota Standalone Noise Barrier information and application:

<http://www.dot.state.mn.us/environment/noise/greater-mn-program.html>

## Transportation Economic Development Program

### **Purpose**

The Transportation Economic Development Program (TED) provides competitive grants to construction projects on state highways that provide measurable economic benefits. The economic benefits may be local, regional or statewide in geographic scale. The program specifically focuses on highway improvements that support job creation or retention.

### **Quick Facts**

Topic	Detail
Statutory reference(s)	Minnesota Statutes <a href="#">174.12</a>
Frequency of project selection	Every other year
Approximate annual funding	\$8-12 million
Funding Source	State Funds
How many years before construction are projects selected	2 to 3 years

### **Where do potential project ideas come from?**

MnDOT solicits applications for funding from cities, counties, tribes and other government entities.

### **Criteria Used in Project Selection**

Criteria	Percent of Score
Economic Benefits: <ul style="list-style-type: none"> <li>• Job creation/retention per \$1 million</li> <li>• Income creation/retention</li> <li>• Benefits to targeted industry clusters and labor, including environmental justice populations</li> </ul>	40%
Transportation Benefits: <ul style="list-style-type: none"> <li>• Benefit-cost analysis</li> <li>• Consistency and priority in state, metropolitan and local plans</li> <li>• Improvements for safety, freight and/or multimodal transportation</li> </ul>	40%
Project Readiness Risk Assessment	20%

Bonus points for project applications that include contributions from non-public sources or that advance the geographic distribution objectives in Minnesota State Statute 174.12 Subd. 7(b).

***Other Information***

The TED program can only fund up to 70 percent of the total transportation infrastructure cost of the project.

The Minnesota Department of Employment and Economic Development administers a parallel Transportation Economic Development Infrastructure (TEDI) program that funds projects on local roads and for other types of transportation.

<http://www.dot.state.mn.us/funding/ted/>

## Weigh Station Capital Improvement Program

### ***Purpose***

The Weigh Station Capital Improvement Program funds the installation, repair and replacement of the physical infrastructure necessary for the enforcement of state and federal weight and size commercial motor carrier laws. The Minnesota Department of Transportation is responsible for the physical infrastructure used to perform enforcement. The Minnesota State Patrol, a division of the Minnesota Department of Public Safety, is responsible for operations and carrying out of enforcement of the laws. The two units of government coordinate closely to identify operational and capital improvements.



### **Quick Facts**

Topic	Detail
Statutory reference(s)	Minnesota Statutes <a href="#">169.771</a> , <a href="#">169.80</a>
Frequency of project selection	Annual
Approximate annual funding	\$2 million
Funding Source	Federal and State Funds
How many years before construction are projects selected	2 to 3 years

### ***Where do potential project ideas come from?***

Currently, projects are solicited through the MnDOT District offices and through input from the Weight Enforcement Unit of the State Patrol. MnDOT and the State Patrol are developing a new 10 year Weight Enforcement Investment Plan that will identify and classify needs throughout the state. The plan will guide future project identification and selection.

**Criteria Used in Project Selection**

**These criteria are still draft and subject to change**

Criteria	Points Available
Roadway Characteristics:	20
<ul style="list-style-type: none"> <li>• Functional classification</li> <li>• Truck crash rate</li> </ul>	
Freight:	20
<ul style="list-style-type: none"> <li>• HCAADT</li> <li>• Truck Vehicle Miles Travelled</li> </ul>	
Geographic Coverage / Point of Entry	15
Enforcement / Safety	25
<ul style="list-style-type: none"> <li>• System Security</li> <li>• Field Experience/Enforcement Data</li> </ul>	
Infrastructure Condition	20

**Other Information**

<http://www.dot.state.mn.us/cvo/index.html>