



ANNOUNCEMENT
Greater Minnesota
JOINT APPLICATION FOR FEDERAL FUNDS

Minnesota Department of Transportation
Office of Traffic, Safety and Technology
in partnership with State Aid for Local Transportation and
Department of Public Safety

INTRODUCTION

The Office of Traffic, Safety and Technology (OTST) is soliciting for approximately \$5 million (see [Appendix E](#) for distribution) over two years (FY 2012 & FY 2013) of local projects for two programs: Highway Safety Improvement Program (HSIP) and High Risk Rural Roads Program (HRRRP). **Supplementary funds will be made available if additional quality projects are submitted.** In an effort to simplify the process one application with one deadline will be used. The Highway Safety Improvement Plan (HSIP) selection committee will evaluate each application, prioritize and determine the best funding source for each. **This solicitation is open to ATP's 3, 4, 6 and 8.**

Independent of the program from which funding will be secured; certain requirements must be met to receive funding.

1. Applications must be postmarked on or before **August 22, 2011.**
2. **The County Road Safety Plan should be the starting point for selecting projects for this solicitation.**
3. Projects that originate from a road safety plan will be given priority. The higher priority given to the project in the safety plan, the more points that project will receive during the selection process.

NOTE: For projects not listed in a road safety plan or not considered an effective safety countermeasure, agencies should consult Julie Whitcher (651-234-7019).

4. Only stand-alone projects will be considered. It is recognized that portions of larger projects have elements that improve the safety of an intersection or section of roadway. Safety features, such as guardrail, that are routinely provided as part of a broader project should be funded from the same source as the broader project. Proposals should be limited to those that can be considered legitimate stand-alone safety projects. In some instances, narrow shoulder paving in conjunction with resurfacing projects may be allowed. See [Appendix G](#) for these exceptions.
5. Applicants submitting systemic lane departure or intersection projects identified in a County Road Safety Plan, need only fill out page 1 of the application and attach the appropriate pages from that plan. Reactive projects and projects not identified in the County Road Safety Plan need to attach additional documentation as indicated on the application. Page 2 of the application applies only to Reactive/Spot location projects.
6. Applicants are strongly encouraged to coordinate with other jurisdictions and agencies affected by the project. A letter from each of these agencies is required stating that they are aware of the project and have

no objections. These letters do not imply participation in funding. Any projects proposed on or adjacent to state roads should be discussed with District Traffic Engineers before the project is submitted.

7. Projects must indicate roadway and specify both a beginning and an ending reference point. This is to expedite the environmental review and historical site evaluation process.
8. Applicants must agree to maintain any selected projects for the life of the project. (See [Appendix C](#) for FHWA Recommended Service Life Criteria.)
9. We will **not** fund road safety audits, overlays, guardrail updates or sign upgrades with this solicitation.
10. New or reconstructed signals will be considered if they meet the criteria contained in [Appendix F](#).
11. Maximum Federal Funding is 90% of eligible total project costs up to:
 - \$250,000 for individual proactive projects
 - \$750,000 for proactive projects involving partnerships with more than one county
 - \$1,000,000 or as much as available by ATP for reactive projects.
 - Agencies may submit multiple applications.

NOTE: There is a minimum 10% local match required. The match must be made in non-federal “hard dollars”. Soft matches (i.e. volunteer labor, donated materials, professional services) will not be included in the match.

12. We will **not** fund “force account” work. All projects must be done by a qualified contractor through the design-bid-build process.
13. Funds are not “capped.” Additional funds may be approved based on bid prices or other unforeseen circumstances. The selection committee must approve any increases in funding.
14. Federal funds are available to Greater Minnesota counties; and agencies within those counties with the ability to receive State Aid. Non-State Aid agencies must be sponsored by their county. [Appendix E](#) contains the breakdown of funding available by ATP.
15. Funding for the project will be eliminated from the program if it does not meet the deadlines described in [Appendix D](#). **The deadline is April 15 of the year that it is programmed.**
16. **Before and after summaries and data collection forms must be completed prior to final payment.** (examples for both are available on State Aid for Local Transportation’s (SALT) traffic safety page) http://www.dot.state.mn.us/stateaid/sa_traffic_safety.html

CRITERIA FOR PROACTIVE PROJECT FUNDING

A **minimum** of 70% of the projects awarded to each ATP will be proactive. The criteria that will be used to select these projects are detailed in this section of the document.

Proposed projects qualify for the **Proactive** Program by the following criteria:

- Agency agrees to maintain for the life of the project – see [Appendix C](#)
- Letter from other agencies involved in the project
 - E.g. +Otter Tail County submits an application for County-wide lighting improvements at CSAH/TH intersections. They need to include a letter from Mn/DOT District 4, stating that the District is aware of the project and has no objections.

Prioritization

Projects will be prioritized using the following criteria:

- Part of a longer range plan (Road Safety Plan or Road Safety Audit Recommendations) – include an excerpt from the existing plan
 - **Higher priority projects from the Road Safety Plan will receive more points during the selection process than lower priority projects.**
- Cost/mile or Cost/intersection

Bonus points will be assessed for the following situations:

- Segment is on the High Risk Rural Road List http://www.dot.state.mn.us/stateaid/sa_traffic_safety.html
- Segment is on the “Top 5% List”
http://www.dot.state.mn.us/trafficeng/safety/funding/pdf/minnesota_2010_top5_list_webversion.pdf

CRITERIA FOR REACTIVE PROJECT FUNDING

A **maximum** of 30% of the projects awarded to each ATP will be reactive. Reactive projects must have a B/C greater than 1 to be considered for funding. The criteria that will be used to select these projects are detailed in this section of the document.

Proposed projects qualify for the **Reactive** Program by the following criteria:

- Must have a benefit/cost (B/C) ratio of 1.0 or greater.* (Note: The B/C ratio shall exclude right-of-way costs.)

***Only crashes contained within the Minnesota Department of Transportation database can be used to determine the B/C for project submittals. If it is found that crashes have been omitted from Mn/DOT's database, you will need to provide the crash report to have those crashes entered into the system.**

- Agency agrees to maintain for the life of the project – see [Appendix C](#).

Required Material and Special Instructions for Reactive Projects

Following, is a list of material required to submit per project. Failure to provide this information will exclude the submission from consideration:

- Project plan or preliminary layout/scope of work proposed
- Crash data; include all crashes from calendar years 2008-2010. Only crashes contained within the Minnesota Department of Transportation's database can be shown. This is to insure that all project proposals can be equally compared. All crash data must be obtained from MnCMAT. If you believe there has been a significant crash increase since 2008, call Julie Witcher (651-234-7019) to discuss the situation.
- HSIP Worksheet – A sample worksheet is included in [Appendix B](#). An Excel version of the HSIP Worksheet is available at: <http://www.dot.state.mn.us/trafficeng/safety/index.html>

Each submission should also include the following:

- Cover Letter – include submitting agency, project manager, and description of project, Federal funds requested, local match and source.
- Location map.
- Letter from other entities involved in the project stating their awareness of the project and that they have no objections.

The Recommended % Change in Crashes should be taken from the Crash Reduction Factors Clearinghouse published by the Federal Highway Administration (FHWA). The clearinghouse can be located at: <http://www.cmfclearinghouse.org/>

Include documentation on how the appropriate crash reduction factor was determined.

The proposal will have to demonstrate in logical fashion how each improvement will impact each type of crash. The Mn/DOT Selection Committee will review the documentation and estimates for accuracy. Some examples of acceptable estimates are listed below:

Example 1: A project is proposing closure of a median at an intersection. Logically, all left turning and cross street right angle crashes will be eliminated (100% reduction in these types of crashes).

Example 2: A project is proposing adding right turn lanes at a signal on two approaches. The clearinghouse <http://www.cmfclearinghouse.org/> shows a 9% reduction (EB analysis) in all crashes. 9% should be used.

The applicant can contact Julie Witcher, 651-234-7019, to discuss crash reduction assumptions for each improvement project prior to submittal.

The most beneficial improvement included in the proposed project should be used to determine the crash reduction factor and the recommended service life ([Appendix C](#)).

In the interest of standardizing the calculation of an annual cost associated with a given type of highway safety improvement, the following inputs are used in all calculations for HSIP submissions:

- ✓ Discount = 4.5%
- ✓ Traffic Growth = 3% (The default value of 3% is a conservative statewide average. The use can input a different value with documentation.)
- ✓ Salvage Value of Right of Way and change in maintenance costs are negligible.

Type of Crash	Crash Severity	Cost per Crash
Fatal (F)	K	\$ 830,000
Personal Injury (PI)	A Incapacitating	\$ 415,000
	B Non-incapacitating	\$ 137,000
	C Possible	\$ 91,000
Property Damage (PD)	N	\$ 12,000

Deadlines

Applications may be submitted electronically or mailed to the OTST office. Applications must be received in the office no later than **August 22, 2011**.

Electronic applications must be in **ONE** pdf formatted document and be formatted to print no larger than 11x17. Email electronic submittals to: Julie.Whitcher@state.mn.us

Paper applications must include six (6) copies and should be mailed or delivered to the following address:

Julie Whitcher
Mn/DOT
1500 West County Road B2, MS 725
Roseville, MN 55113

Further Assistance

Applicants having questions or requiring assistance with this application should contact:

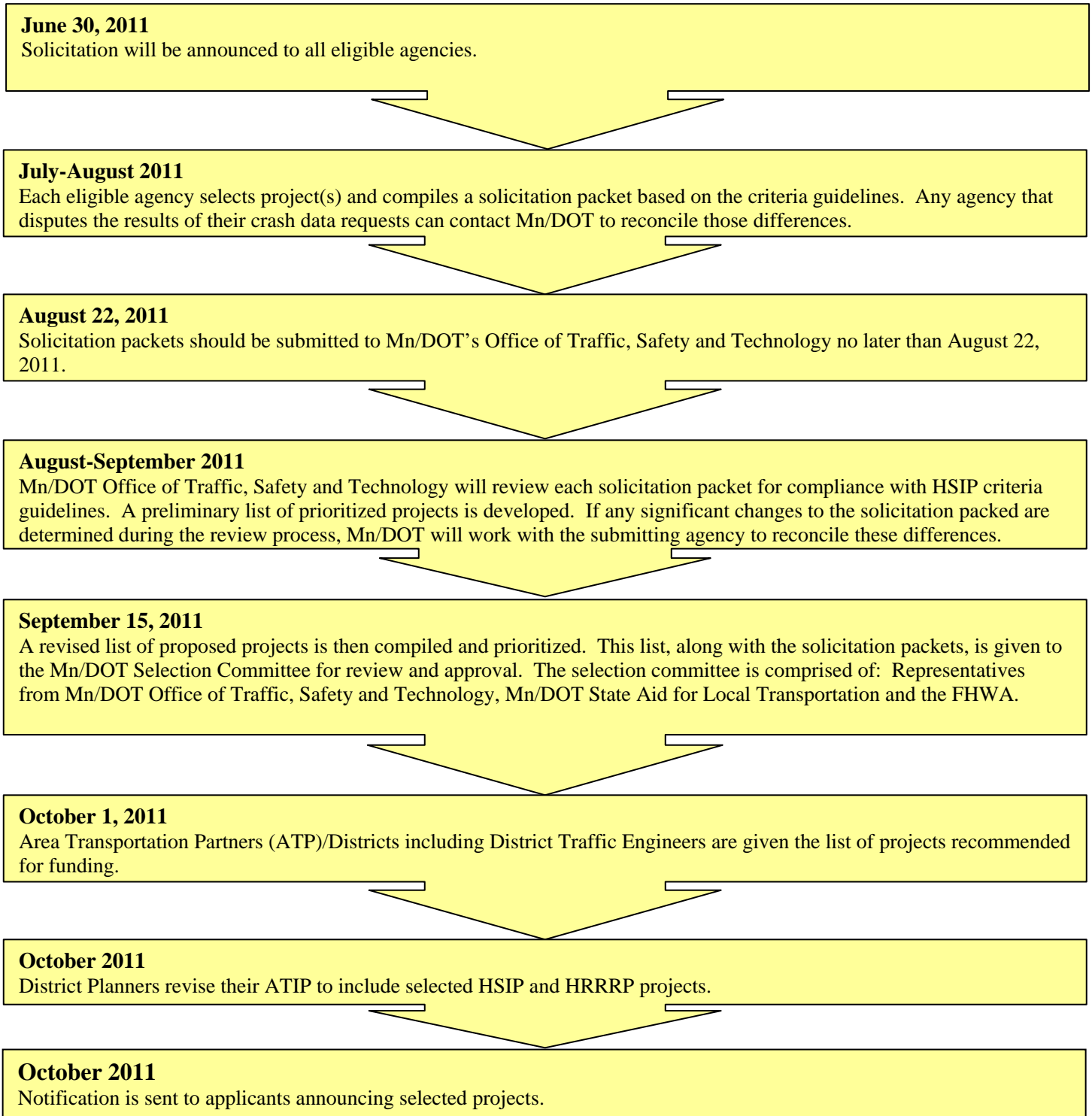
Julie Whitcher, OTST
651-234-7019
Julie.Whitcher@state.mn.us

Brad Estochen, OTST
651-234-7011
Bradley.Estochen@state.mn.us

Mark Vizecky, State Aid
651-366-3839
Mark.Vizecky@state.mn.us

Appendix A

Combined Program for HSIP, HRRRP, and Central Safety Fund Greater Minnesota Local Solicitation



Appendix B

Sample HSIP Worksheet

HSIP worksheet		Control Section	T.H. / Roadway	Location			Beginning Ref. Pt.	Ending Ref. Pt.	State, County, City or Township	Study Period Begins	Study Period Ends
			I-494	Portland Ave to Nicollet Ave			3+00.848	4+00.357	Hennepin Co.	1/1/2005	12/31/2007
		Description of Proposed Work		Construct Westbound auxiliary lane between Portland and Nicollet							
Accident Diagram Codes		1 Rear End	2 Sideswipe Same Direction	3 Left Turn Main Line	5 Right Angle	4,7 Ran off Road	8, 9 Head On/ Sideswipe - Opposite Direction	Pedestrian	Other	Total	
Study Period: Number of Crashes	Fatal	F									
	Personal Injury (PI)	A									
		B									
		C	3							3	
Property Damage	PD	7	3						10		
% Change in Crashes	Fatal	F									
	PI	A									
		B									
		C	-25%								
Property Damage	PD	-25%	-25%								
Change in Crashes <small>= No. of crashes X % change in crashes</small>	Fatal	F									
	PI	A									
		B									
		C	-0.75							-0.75	
Property Damage	PD	-1.75	-0.75						-2.50		
Year (Safety Improvement Construction)			2013								
Project Cost (exclude Right of Way)		\$ 600,000	Type of Crash	Study Period: Change in Crashes	Annual Change in Crashes	Cost per Crash	Annual Benefit	B/C= 1.18			
Right of Way Costs (optional)			F			\$ 780,000					
Traffic Growth Factor		3%	A			\$ 390,000					
Capital Recovery			B			\$ 121,000					
1. Discount Rate		4.5%	C	-0.75	-0.25	\$ 75,000	\$ 18,767				
2. Project Service Life (n)		30	PD	-2.50	-0.83	\$ 12,000	\$ 10,009				
Total						\$ 28,776	Office of Traffic, Safety and Technology December 2008				

Appendix C

Recommended Service Life Criteria

<u>Description</u>	<u>Service Life</u> (years)	<u>Description</u>	<u>Service Life</u> (years)
<u>Intersection & Traffic Control</u>		<u>Roadway & Roadside</u>	
Construct Turning Lanes	20	Widen Traveled Way (no lanes added)	20
Provide Traffic Channelization	20	Add Lane(s) to Traveled Way	20
Improve Sight Distance	20	Construct Median for Traffic Separation	20
Install Traffic Signs	10	Wide or Improve Shoulder	20
Install Pavement Marking	2	Realign Roadway (except at railroads)	20
Install Delineators	10	Overlay for Skid Treatment	10
Install Illumination	20	Groove Pavement for Skid Treatment	10
Upgrade Traffic Signals	20	Install Breakaway Sign Supports	10
Install New Traffic Signals	20	Install Breakaway Utility Poles	10
Retime Coordinated System	5	Relocate Utility Poles	20
Construct Roundabout	20	Install Guardrail End Treatment	10
		Upgrade Guardrail	10
		Upgrade or Install Concrete Median Barrier	20
		Upgrade or Install Cable Median Barrier	10
		Install Impact Attenuators	10
		Flatten or Re-grade Side Slopes	20
		Install Bridge Approach Guardrail Transition	10
		Remove Obstacles	20
		Install Edge Treatments	7
		Install Centerline Rumble Strips	7
<u>Pedestrian & Bicycle Safety</u>			
Construct sidewalk	20		
Construct Pedestrian & Bicycle			
Overpass/Underpass	30		
Install Fencing & Pedestrian Barrier	10		
Construct Bikeway	20		
<u>Structures</u>			
Widen or Modify Bridge for Safety	20		
Replace Bridge for Safety	30		
Construct New Bridge for Safety	30		
Replace/Improve Minor Structure for Safety	20		
Upgrade Bridge Rail	20		

Appendix D

A brief overview of the Delegated Contract Process (DCP) has been provided below. The outlined criteria must be completed to meet the April 15th deadline requirement for all selected projects:

1. Environmental document prepared by sponsoring agency and **approved** by DSAE and SALT.
2. Right of way certificate approved or condemnation proceedings have been formally initiated*.
3. District State Aid Engineer (DSAE) approval of plans and a satisfactory review by State Aid that project plans are complete and reflect the project that was selected.
4. Engineer's Estimate and working days estimate*.
5. Special provision information*.
6. Utility relocation certificate*.
7. Permits received or NPDES permit filled out by sponsoring agency*.
8. SALT requests DBE goal.
9. Plans reviewed and approved by SALT.
10. SALT requests authorization for HSIP or HRRRP projects.
11. Bid opening can be set after authorization by SLAT and sponsoring agency.
12. Sponsoring agency prepares proposal, sells project documents and advertises per State Statute (required ad language provided by SALT).
13. Bid opening should be within 90 days of authorization.
14. DBE clearance must be given by Mn/DOT Office of Civil Rights before project is awarded by sponsoring agency (if applicable).

*These items are all submitted to SALT along with DSAE approved plan set.

Additional Resources:

For detailed information about the FEDERAL (DCP) process, please visit our website:
www.dot.state.mn.us/stateaid/dcp/dcpchecklist.htm

If you have any questions about the Federal Aid process, please contact your DSAE or Merry Daher with SALT at Merry.Daher@dot.state.mn.us or (651) 366-3821.

Appendix E

Distribution of Funds

This table represents the funds that are available for distribution during this solicitation.

Dollars Available				
	ATP 3	ATP 4	ATP 6	ATP 8
2012	\$ 215,958	\$ 252,060	\$ 510,869	\$ 679,412
2013	\$ 892,411	\$ 600,000	\$ 1,319,792	\$ 679,412

Additional funding will be made available if quality projects are received above and beyond the dollar amounts shown in the table above.

Appendix F: HSIP and Signals

(Revised 1/18/2011)

In most cases, traffic signals are not safety control devices. They assign right of way for vehicles and are necessary for operational purposes. However, in some cases they can improve safety. The objective of the Highway Safety Improvement Program (HSIP) is to "reduce the occurrence of and the potential for fatalities and serious injuries resulting from crashes on all public roads" (23 CRF 924.5). Signal projects will be considered for funding provided they meet the following criteria.

1. New Signals

- Warrant 7, Crash Experience from the MMUTCD must be met. Specifically, "5 or more reported crashes, of the types susceptible to correction by a traffic control signal, have occurred within a 12-month period". Exceptions to meeting this warrant may be made if an adequate case is made on how the new signal will "reduce the number of, or potential for, fatalities and serious injuries" as required by SAFETEA-LU.
- All new signals shall meet current Mn/DOT design standards. If exceptions to incorporating these standards are necessary due to site specific conditions, explanation should be included with the application.
- Installation of red light running (enforcement) lights is strongly encouraged. Installation costs are low when installed with new signals and they provide the benefit of red light running enforcement to be accomplished by one law enforcement officer, instead of two.
- Documentation should be provided confirming that other intersection types were considered but are not feasible. Those considered should include intersection types that reduce the probability of severe right-angle crashes. Roundabouts, restricted crossing u-turn (RCUT) intersections, and some other alternative intersection types fall into this category.

2. Existing Signals

- Rebuilding an existing signal system is only eligible for HSIP funding if it is necessary for implementation of a geometric improvement (constructing new lanes). The signal system is incidental to the primary safety improvement on these projects, which is geometric.

3. Retiming of signal systems

- The development and implementation of new signal timing plans for a series of signals, a corridor or the entire system is eligible.

03 Before a decision is made to install a traffic control signal, consideration shall be given to the implementation of other remedial measures, such as warning signs and flashers, school speed zones, school crossing guards, or a grade-separated crossing.

04 The School Crossing signal warrant shall not be applied at locations where the distance to the nearest traffic control signal along the major street is less than 300 feet, unless the proposed traffic control signal will not restrict the progressive movement of traffic.

Guidance:

05 If this warrant is met and a traffic control signal is justified by an engineering study, then:

- A. If it is installed at an intersection or major driveway location, the traffic control signal should also control the minor-street or driveway traffic, should be traffic-actuated, and should include pedestrian detection.
- B. If it is installed at a non-intersection crossing, the traffic control signal should be installed at least 100 feet from side streets or driveways that are controlled by STOP or YIELD signs, and should be pedestrian-actuated. If the traffic control signal is installed at a non-intersection crossing, at least one of the signal faces should be over the traveled way for each approach, parking and other sight obstructions should be prohibited for at least 100 feet in advance of and at least 20 feet beyond the crosswalk or site accommodations should be made through curb extensions or other techniques to provide adequate sight distance, and the installation should include suitable standard signs and pavement markings.
- C. Furthermore, if it is installed within a signal system, the traffic control signal should be coordinated.

Section 4C.07 Warrant 6. Coordinated Signal System

Support:

01 Progressive movement in a coordinated signal system sometimes necessitates installing traffic control signals at intersections where they would not otherwise be needed in order to maintain proper platooning of vehicles.

Standard:

02 The need for a traffic control signal shall be considered if an engineering study finds that one of the following criteria is met:

- A. On a one-way street or a street that has traffic predominantly in one direction, the adjacent traffic control signals are so far apart that they do not provide the necessary degree of vehicular platooning.
- B. On a two-way street, adjacent traffic control signals do not provide the necessary degree of platooning and the proposed and adjacent traffic control signals will collectively provide a progressive operation.

Guidance:

03 The Coordinated Signal System signal warrant should not be applied where the resultant spacing of traffic control signals would be less than 1,000 feet.

Section 4C.08 Warrant 7. Crash Experience

Support:

01 The Crash Experience signal warrant conditions are intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal.

Standard:

02 The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

- A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and
- B. Five or more reported crashes, of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash; and
- C. For each of any 8 hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same 8 hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

Option:

- 03 If the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the traffic volumes in the 56 percent columns in Table 4C-1 may be used in place of the 80 percent columns.

Section 4C.09 Warrant 8, Roadway Network

Support:

- 01 Installing a traffic control signal at some intersections might be justified to encourage concentration and organization of traffic flow on a roadway network.

Standard:

- 02 **The need for a traffic control signal shall be considered if an engineering study finds that the common intersection of two or more major routes meets one or both of the following criteria:**
- A. The intersection has a total existing, or immediately projected, entering volume of at least 1,000 vehicles per hour during the peak hour of a typical weekday and has 5-year projected traffic volumes, based on an engineering study, that meet one or more of Warrants 1, 2, and 3 during an average weekday; or
 - B. The intersection has a total existing or immediately projected entering volume of at least 1,000 vehicles per hour for each of any 5 hours of a non-normal business day (Saturday or Sunday).
- 03 **A major route as used in this signal warrant shall have at least one of the following characteristics:**
- A. It is part of the street or highway system that serves as the principal roadway network for through traffic flow.
 - B. It includes rural or suburban highways outside, entering, or traversing a city.
 - C. It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study.

Section 4C.10 Warrant 9, Intersection Near a Grade Crossing

Support:

- 01 The Intersection Near a Grade Crossing signal warrant is intended for use at a location where none of the conditions described in the other eight traffic signal warrants are met, but the proximity to the intersection of a grade crossing on an intersection approach controlled by a STOP or YIELD sign is the principal reason to consider installing a traffic control signal.

Guidance:

- 02 *This signal warrant should be applied only after adequate consideration has been given to other alternatives or after a trial of an alternative has failed to alleviate the safety concerns associated with the grade crossing. Among the alternatives that should be considered or tried are:*
- A. *Providing additional pavement that would enable vehicles to clear the track or that would provide space for an evasive maneuver, or*
 - B. *Reassigning the stop controls at the intersection to make the approach across the track a non-stopping approach.*

Standard:

- 03 **The need for a traffic control signal shall be considered if an engineering study finds that both of the following criteria are met:**
- A. A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach; and
 - B. During the highest traffic volume hour during which rail traffic uses the crossing, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the minor-street approach that crosses the track (one direction only, approaching the intersection) falls above the applicable curve in Figure 4C-9 or 4C-10 for the existing combination of approach lanes over the track and the distance D, which is the clear storage distance as defined in Section 1A.13.

Guidance:

- 04 *The following considerations apply when plotting the traffic volume data on Figure 4C-9 or 4C-10:*
- A. *Figure 4C-9 should be used if there is only one lane approaching the intersection at the track crossing location and Figure 4C-10 should be used if there are two or more lanes approaching the intersection at the track crossing location.*

Appendix G

Guidelines for HSIP-funded narrow shoulder paving in conjunction with county resurfacing projects

The HSIP steering committee agrees that when narrow shoulder paving projects have been funded through HSIP, it makes sense under certain circumstances to do the work in conjunction with a resurfacing project, rather than as a separate, stand-alone project. The steering committee is proposing revised guidelines on this issue that will affect future project selection.

The County Road Safety Plans (CRSPs) are identifying **6 miles per county per year** for narrow shoulder paving. This work involves the paving of existing aggregate or turf shoulders with 1 to 2 feet of pavement and the addition of a safety edge and a shoulder rumble strip or edgeline rumble stripe. The following guidelines are proposed for the selection of future HSIP projects on the local system:

- Narrow shoulder paving can be done in conjunction with resurfacing if the project is along one of the segments specifically identified in the CRSP for this type of work.
- The project can be at a different location than those identified in the CRSP if it is along a higher-risk segment, as identified in the CRSP. The CRSP assigns a risk rating to highway segments based on the following criteria: traffic volume, rate and density of road departure crashes, curve density and edge assessment. The risk rating ranges from 0 (lower risk) to 5 (higher risk). **If the proposed project is along a highway segment with a rating of 4 or 5, then it can be done in conjunction with a resurfacing project.** This process ensures that narrow shoulder paving is being done at locations of higher risk rather than being driven by the schedule of pavement rehabilitation projects.
- The shoulder paving must include a safety edge and either shoulder or edgeline rumble strips.
- The County should use regular construction dollars to upgrade guardrail and other safety hardware as part of the resurfacing project.

At this time, all other HSIP-funded project types on the local system will continue to be funded as separate, stand-alone projects.