

# Cost Participation Policy for Detours

*Prepared by CTC & Associates LLC*

The MnDOT Office of Materials and Road Research is interested in determining how state departments of transportation (DOTs) compensate local governments for damage to local roads during highway detours that route traffic from state highways onto local roads. MnDOT is also interested in learning how local governments are compensated for expenses incurred when state DOTs use local roads as haul roads during construction.

This Transportation Research Synthesis presents the results of a survey distributed to members of the American Association of State Highway and Transportation Officials (AASHTO) Subcommittee on Construction about their DOT's cost participation policies and practices for detours.



## **Technical Advisory Panel**

**Tim Andersen**, Technical Liaison  
MnDOT Office of Materials and Road Research

**Wes Alwan**, Principal Investigator  
CTC & Associates LLC

**Mark Linsenmayer**, Principal Investigator  
CTC & Associates LLC

**Dan Warzala**, Project Coordinator  
MnDOT Research Services & Library

**Paul Johns**, Panelist  
MnDOT Office of Construction and Innovative Contracting

*The purpose of this Transportation Research Synthesis (TRS) is to serve as a synthesis of pertinent completed research to be used for further study and evaluation by MnDOT. This TRS does not represent the conclusions of either the authors or MnDOT.*

# Cost Participation Policy for Detours

## Introduction

The MnDOT Office of Materials and Road Research is interested in determining how state departments of transportation (DOTs) are compensating local governments for damage to local roads during highway detours that route traffic onto local roads. MnDOT is also interested in learning how local governments are compensated for expenses incurred when state DOTs use local roads as haul roads during construction.

To gather information for this effort, CTC & Associates distributed an online survey to members of the American Association of State Highway and Transportation Officials (AASHTO) Subcommittee on Construction about their DOT's cost participation policies and practices for detours. CTC also conducted a literature search for research related to cost participation or state DOT policies available online.

## Summary of Findings

CTC did not find any research topics related to state DOT compensation of local governments when their roads are used for detours or hauling. DOT policies or state statutes were also not available online.

However, 21 state DOTs responded to a survey distributed to members of the AASHTO Subcommittee on Construction. With the exception of Iowa and Arizona, DOTs do not seem to use a method (based on gas taxes or other factors) to compensate local governments monetarily. Instead DOTs will repair or repave (or have contractors repair or repave) roads as necessary.

Highlighted below are key findings from the survey responses in these topic areas:

- Compensation for damage or use of local roads.
- Method for calculating compensation.
- Written policy or statute for the compensation method.
- Complaints about inadequate compensation.
- Plans to change the current compensation method or implement a reimbursement policy.

## Compensation for Damage or Use of Local Roads

Eight state DOTs (Arizona, Connecticut, Indiana, Iowa, Michigan, Nebraska, South Dakota and Wyoming) compensate local governments for damage to local roads from detours or for use of local roads as haul roads.

Thirteen state DOTs reported that they don't compensate local governments; however, respondents from eight of these state DOTs (Alabama, Arkansas, Missouri, New Hampshire, Oklahoma, Oregon, South Carolina and Utah) provided an informal policy for compensating local governments at least on some occasions, usually by repairing or repaving roads, or by having contractors repair or repave roads.

Virginia and West Virginia do not compensate because they own and maintain their secondary road system.

## Method for Calculating Compensation

Of the eight state DOTs that said they compensate local governments, seven shared a method. Arizona negotiates with local governments on a case-by-case basis in advance to compensate for damage to the road—

either by hiring a contractor to repair the road, providing funds to allow localities to repair the road or improving the road before the detour. Connecticut assesses the existing road condition and if the road needs improvements, project staff may negotiate with the town or city for in-kind replacement after construction. If the road is in good condition, construction personnel will evaluate the roadway and may direct improvements as extra work. Iowa compensates for detours based on gas tax income earned by the detoured traffic during the detour. However, the county or city may request compensation based on an alternate method that requires the county or city to prepare a cost estimate for restoring the detour route to its pre-detour condition. Michigan repairs or repaves the road as part of the project. Nebraska is responsible for fixing the road used as a detour for damage caused during use. South Dakota inspects the road after the detour and makes repairs at no cost to the local government. On some (but not all) projects, Wyoming overlays the road after the detour.

### **Written Policy or Statute for the Compensation Method**

Three of the eight states that said they compensated local governments (Connecticut, Iowa and Nebraska) provided a written policy for their method. Only Nebraska's policy is enforced by state statute.

### **Complaints about Inadequate Compensation**

Only two states—South Dakota and Wyoming—said they have received complaints about inadequate compensation from local governments. In South Dakota, sometimes local governments request a thicker overlay, and sometimes contractors want to do less (or something different). In some rare cases, Wyoming has agreed to additional road user costs requested by cities.

### **Plans to Change the Current Compensation Method or Implement a Reimbursement Policy**

None of the survey respondents said their DOT had considered changing the way it compensates local governments.

Of the 13 states that said they do not compensate local governments, two (Virginia and West Virginia) do not compensate because they own and maintain their secondary road system. Three of the 13 states (Missouri, Oregon and Utah) said their DOT had considered implementing a policy. Five additional states (Alabama, Arkansas, New Hampshire, Oklahoma and South Carolina) provided comments suggesting that they in fact already have an informal policy for compensating local governments, typically by repaving roads.

## Detailed Findings

The MnDOT Office of Materials and Road Research is interested in learning how state departments of transportation (DOTs) are compensating local governments for damage to local roads during highway detours that route traffic onto local roads. MnDOT is also interested in learning how local governments are compensated for expenses incurred when state DOTs use local roads as haul roads during construction. Currently MnDOT determines compensation in these circumstances by calculating the gas tax income generated by the trunk highway traffic that is detoured onto a local government roadway segment. The agency uses average daily traffic (ADT), length of detour and duration in these calculations. Minnesota localities are concerned that ADT is not the best method for determining impacts on roads during detours.

## Survey of Practice

### Survey Approach

An online survey was distributed to members of the American Association of State Highway and Transportation Officials (AASHTO) Subcommittee on Construction concerning their policies and practices for compensating local governments for damage to local roads during highway detours that route traffic onto local roads, and for the use of local roads as haul roads during construction. The survey consisted of the following questions:

1. Does your agency compensate local governments for damage caused to local roads during detours or for the use of local roads as haul roads?
2. What method does your agency use to calculate compensation for damage caused to local roads during detours and/or for the use of local roads as haul roads?
3. Is there a written policy, specification or other documentation for this method? If so, please provide documentation or a link to documentation of this method.
4. Is this method enforced by statute? If so, please provide documentation or a link to documentation.
5. Have local governments complained that this method does not adequately compensate them? If so, what is the nature of these complaints?
6. Have you considered changing your method for calculating compensation? If so, what options have you explored?
7. Have you considered implementing a policy to reimburse local governments for damage caused to local roads during detours or for the use of local roads as haul roads? If so, what options have you explored?

Twenty-one state DOTs responded to the survey:

- Alabama.
- Arizona.
- Arkansas.
- Connecticut.
- Delaware.
- Indiana.
- Iowa.
- Kentucky.
- Michigan.
- Missouri.
- Nebraska.
- New Hampshire.
- Oklahoma.
- Oregon.
- South Carolina.
- South Dakota.
- Utah.
- Virginia.
- West Virginia.
- Wisconsin.
- Wyoming.

## **Summary of Survey Results**

Survey findings are summarized below according to the following topic areas:

- Compensation for damage or use of local roads.
- Method for calculating compensation.
- Written policy for the compensation method.
- Statute enforcing the compensation method.
- Complaints about inadequate compensation.
- Plans to change the current compensation method.
- Plans to implement a reimbursement policy.

[Appendix A](#) provides the full text of the survey responses.

### **Compensation for Damage or Use of Local Roads**

Eight state DOTs—Arizona, Connecticut, Indiana, Iowa, Michigan, Nebraska, South Dakota and Wyoming—compensate local governments for damage to local roads from detours or for use of local roads as haul roads.

Thirteen state DOTs reported that they don't compensate local governments; however, later in the survey, respondents from eight of these state DOTs—Alabama, Arkansas, Missouri, New Hampshire, Oklahoma, Oregon, South Carolina and Utah—provided an informal policy for compensating local governments at least on some occasions, usually by repairing or repaving roads, or by having contractors repair or repave roads. (See responses to Question 7.) Thus, 16 respondents compensate local governments.

Using this broader interpretation, of the five remaining states that don't compensate local governments, two—Virginia and West Virginia—do not compensate because they own and maintain their secondary road system. Only three states—Delaware, Kentucky and Wisconsin—gave no explanation for not compensating local governments.

### **Method for Calculating Compensation**

Of the eight state DOTs that compensate local governments, seven shared a method:

- *Arizona.* Arizona negotiates with local governments on a case-by-case basis in advance to compensate for damage to the road—either by hiring a contractor to repair the road, providing funds to allow localities to repair the road or improving the road before the detour.
- *Connecticut.* Connecticut DOT notifies the local municipality of the proposed detour. Project staff then assesses the existing condition of the road. If the road needs improvements, project staff may negotiate with the town or city for in-kind replacement after construction. If the road is in good condition, no negotiation usually takes place but construction personnel evaluate the roadway and may direct improvements as extra work. For details about the Connecticut DOT policy, see **Written Policy for the Compensation Method** below.
- *Iowa.* Iowa compensates for detours based on gas tax income earned by the detoured traffic during the detour. However, the county or city may request compensation based on an alternate method by providing detailed documentation of the damage that occurred on the detour route as a result of the detoured primary highway traffic, and then using that documentation to prepare a cost estimate to

restore the detour route to its pre-detour condition. For haul roads, a project engineer negotiates needed repairs with local jurisdiction. See **Written Policy for the Compensation Method** below for details about the Iowa DOT policy.

- *Michigan*. Michigan repairs or repaves the road as part of the project. The Michigan respondent did not provide documentation about the DOT's policy.
- *Nebraska*. Nebraska is responsible for fixing the roads used as detours for damage caused during use. For details about the Nebraska DOT policy, see **Written Policy for the Compensation Method** below.
- *South Dakota*. South Dakota inspects the road after the detour and makes repairs at no cost to the local government. (The contractor and South Dakota DOT each cover 50 percent of the cost).
- *Wyoming*. On some (but not all) projects, Wyoming overlays the road after the detour. DOT staff meets with the local government, determines the condition of the road and makes sure it leaves the road in no worse condition.

### **Written Policy for the Compensation Method**

Three of the eight states that compensate local governments provided a written policy for their method.

#### ***Connecticut***

**Section 2-922A: Detour of a State Highway to a Town Road**, Volume 2, Construction Manual, Version 3.0, Connecticut Department of Transportation, January 2017.

[http://www.ct.gov/dot/lib/dot/documents/dconstruction/construction\\_manual/CM\\_ver\\_3.0.pdf](http://www.ct.gov/dot/lib/dot/documents/dconstruction/construction_manual/CM_ver_3.0.pdf)

Section 2-922A, beginning on page 715 of the PDF, provides the detour procedure for construction traffic from a state highway to a town road.

#### ***Iowa***

**Policy 600.05: Temporary Closure of Primary Highways and Establishment and Revocation of Detours**, Policies and Procedures Manual, Iowa Department of Transportation, February 2006.

See [Appendix B](#).

From the *Contents* section (see page 1 of the PDF):

This policy establishes the procedures for temporarily closing a primary highway due to construction, reconstruction, maintenance or natural disasters and other emergencies; for designating, implementing and removing a detour over a primary route or over a secondary road or city street; and for determining the restoration and compensation due the county or city for the use of its road or street as a temporary primary road detour.

#### ***Nebraska***

**Nebraska Revised Statute 39-1347: County Roads; City and Village Streets; Authority to Use for Detour; Duties of Department**, Nebraska Legislature, undated.

<http://nebraskalegislature.gov/laws/statutes.php?statute=39-1347>

This statute addresses the use of any road or street as a detour for the state highway system.

### **Statute Enforcing the Compensation Method**

Only one state—Nebraska—said its policy is enforced by statute (Statute 39-1347, cited above).

### **Complaints about Inadequate Compensation**

Only two states—South Dakota and Wyoming—said they have received complaints from local governments. In South Dakota, sometimes local governments request a thicker overlay, and sometimes contractors want to do less (or something different). In some rare cases, Wyoming has agreed to additional road user costs requested by cities.

### **Plans to Change the Current Compensation Method**

None of the survey respondents said their DOT had considered changing the way it compensates local governments.

### **Plans to Implement a Reimbursement Policy**

Of the 13 states that said they do not compensate local governments, two—Virginia and West Virginia—do not compensate because they own and maintain their secondary road system. Three of the 13 states—Missouri, Oregon and Utah—said their DOT had considered implementing a policy. Five additional states that answered “no” to this survey question—Alabama, Arkansas, New Hampshire, Oklahoma and South Carolina—provided comments suggesting that they in fact already have an informal policy for compensating local governments, typically by repaving roads. Comments from these eight state DOT survey respondents are summarized below:

- *Alabama.* The contractor is required to limit loads on roads, or must patch or resurface roads as necessary.
- *Arkansas.* Arkansas State Highway and Transportation Department doesn't use local roads for detours. Contractors are responsible for repairing public road damage caused by hauling.
- *Missouri.* Missouri DOT detours only on state routes. In special situations, the agency enters a formal agreement during the design phase of the contract to compensate cities and counties.
- *New Hampshire.* New Hampshire DOT sometimes repaves a section of a local road if the agency needs to use the road for a detour.
- *Oklahoma.* Oklahoma DOT has on occasion paved or improved a local road designated as a detour.
- *Oregon.* Oregon DOT may include repaving of a local road as part of a project if the road is designated in the project as a detour route for truck traffic.
- *South Carolina.* South Carolina DOT fixes local roads that it damages.
- *Utah.* Utah DOT leaves it up to the contractor to trade road repairs on a local road for permission to use the road as a haul route.



# Appendix A

## Cost Participation Policy for Detours: Survey Results

The full text of survey responses from 21 state departments of transportation (DOTs) is provided below; also included is a survey response from MnDOT. Responses have been edited for clarity. For reference, an abbreviated version of each question is included before the response. The full question text appears on page 3 of this report.

### Alabama

Contact: Jeff Benefield, Assistant Construction Engineer, Construction Bureau, Alabama Department of Transportation, 334-242-6213, [BenefieldJ@dot.state.al.us](mailto:BenefieldJ@dot.state.al.us).

1. **Compensation:** No.
2. **Method:** N/A.
3. **Written policy:** N/A.
4. **Statute:** N/A.
5. **Complaints:** N/A.
6. **Considered changing method:** N/A.
7. **Considered implementing reimbursement policy:** No. Generally, we do not provide reimbursement since the contractor is required, by specification, to limit his loads such that the existing roadways are not damaged; however, there have been cases where we've agreed to patch a resurface, say, a county road that was damaged during construction. Or if we anticipate damage due to hauling on a project, we'll set up pay items for resurfacing once the work (and hauling) [are] completed.

### Arizona

Contact: Julie Kliewer, Assistant State Engineer, Phoenix Construction District, Arizona Department of Transportation, 602-712-7323, [JKliewer@azdot.gov](mailto:JKliewer@azdot.gov).

1. **Compensation:** Yes.
2. **Method:** Arizona compensates on a case-by-case basis. It's based on negotiation and there's no specific method, written policy or statute. AZDOT negotiates with the local government for a result both parties think is fair. It involves either giving them money (by looking at similar roads on a cost-per-mile basis) or hiring a contractor to repair the road, or sometimes having the road improved before the detour. The agreement is made with the local government in advance. Contact Velvet Mathew (602-712-3062, [VMathew@azdot.gov](mailto:VMathew@azdot.gov)) for more information. (CTC was unable to reach Matthew.)
3. **Written policy:** No.
4. **Statute:** No.
5. **Complaints:** No.
6. **Considered changing method:** No.
7. **Considered implementing reimbursement policy:** N/A.

## Arkansas

Contact: David Henning, State Construction Engineer, Construction Division, Arkansas State Highway and Transportation Department, 501-569-2251, [David.Henning@ahtd.ar.gov](mailto:David.Henning@ahtd.ar.gov).

1. **Compensation:** No.
2. **Method:** N/A.
3. **Written policy:** N/A.
4. **Statute:** N/A.
5. **Complaints:** N/A.
6. **Considered changing method:** N/A.
7. **Considered implementing reimbursement policy:** No. Contractor is responsible for damage to public roads due to hauling. We typically do not use local roads for detours (including maintenance work).

## Connecticut

Contact: Mary Baier, Transportation Supervising Engineer, Quality Assurance, Office of Construction, Connecticut Department of Transportation, 860-594-3256, [Mary.Baier@ct.gov](mailto:Mary.Baier@ct.gov).

1. **Compensation:** Yes.
2. **Method:** By state law we are only required to notify the local municipality of the proposed detour. Project staff will assess the existing condition of the road and may negotiate with the town or city for replacement in kind post-construction. If the road is in good shape, no negotiation usually takes place but construction personnel evaluate the roadway and may direct improvements as extra work.
3. **Written policy:** Yes.  
[http://www.ct.gov/dot/lib/dot/documents/dconstruction/construction\\_manual/CM\\_ver\\_3.0.pdf](http://www.ct.gov/dot/lib/dot/documents/dconstruction/construction_manual/CM_ver_3.0.pdf) See Section 2-922A: Detour of a State Highway to a Town Road. [See **Related Resource** below.]
4. **Statute:** No.
5. **Complaints:** No.
6. **Considered changing method:** No.
7. **Considered implementing reimbursement policy:** N/A.

## **Related Resource**

**Section 2-922A: Detour of a State Highway to a Town Road**, Volume 2, Construction Manual, Version 3.0, Connecticut Department of Transportation, January 2017.

[http://www.ct.gov/dot/lib/dot/documents/dconstruction/construction\\_manual/CM\\_ver\\_3.0.pdf](http://www.ct.gov/dot/lib/dot/documents/dconstruction/construction_manual/CM_ver_3.0.pdf)

This section of the manual provides the detour procedure for construction traffic from a state highway to a town road (see page 715 of the PDF).

## Delaware

Contact: Chris Costello, North II Construction Engineer, Delaware Department of Transportation, 302-326-4401, [Chris.Costello@state.de.us](mailto:Chris.Costello@state.de.us).

1. **Compensation:** No.
2. **Method:** N/A.
3. **Written policy:** N/A.
4. **Statute:** N/A.
5. **Complaints:** N/A.
6. **Considered changing method:** N/A.
7. **Considered implementing reimbursement policy:** No.

## Indiana

Contact: Gregory Pankow, State Construction Engineer, Indiana Department of Transportation, 317-232-5502, [GPankow@indot.in.gov](mailto:GPankow@indot.in.gov).

1. **Compensation:** Yes.
2. **Method:** [No response.]
3. **Written policy:** [No response.]
4. **Statute:** [No response.]
5. **Complaints:** [No response.]
6. **Considered changing method:** [No response.]
7. **Considered implementing reimbursement policy:** N/A.

## Iowa

Contact: Thomas Jacobson, Contract Administration, Office of Construction and Materials, Iowa Department of Transportation, 515-239-1453, [Thomas.Jacobson@iowadot.us](mailto:Thomas.Jacobson@iowadot.us).

1. **Compensation:** Yes.
2. **Method:** For detours, PPM 600.05 Temporary Closure of Primary Highways and Establishment and Revocation of Detours [[Appendix B](#); see **Related Resource** below].

[From Appendix A of the policy; see page 6 of the PDF] The gas tax method compensates a county or city for the use of its non-primary road or street as a temporary primary road detour. It is based on gas tax income earned by the detoured traffic during the detour. This method has no direct relationship to damage.

[From Appendix B of the policy; see page 9 of the PDF] The alternate method requires the county or city to provide detailed documentation of the damage that occurred on the secondary road or city street due to the detoured primary highway traffic. Using that documentation, the county or city must prepare a cost estimate to repair the damage in order to restore the detour route to its pre-detour condition.

For haul roads, [the] project engineer negotiates needed repairs with local jurisdiction.

3. **Written policy:** [See [Appendix B](#), page 1 of the PDF.] [T]he Department must either restore the secondary roads and city streets to as good a condition as existed prior to their use as detours, or determine and reimburse such amount as will adequately compensate the counties and cities for the added detour traffic.
4. **Statute:** No.
5. **Complaints:** No.
6. **Considered changing method:** No.
7. **Considered implementing reimbursement policy:** N/A.

#### **Related Resource**

**Policy 600.05: Temporary Closure of Primary Highways and Establishment and Revocation of Detours,** Policies and Procedures Manual, Iowa Department of Transportation, February 2006.

See [Appendix B](#).

*From the Contents* (see page 1 of the PDF): This policy establishes the procedures for temporarily closing a primary highway due to construction, reconstruction, maintenance or natural disasters and other emergencies; for designating, implementing and removing a detour over a primary route or over a secondary road or city street; and for determining the restoration and compensation due the county or city for the use of its road or street as a temporary primary road detour.

#### **Kentucky**

Contact: Ryan Griffith, Director, Division of Construction, Kentucky Transportation Cabinet, 502-564-4780, [Ryan.Griffith@ky.gov](mailto:Ryan.Griffith@ky.gov).

1. **Compensation:** No.
2. **Method:** N/A.
3. **Written policy:** N/A.
4. **Statute:** N/A.
5. **Complaints:** N/A.
6. **Considered changing method:** N/A.
7. **Considered implementing reimbursement policy:** No.

#### **Michigan**

Contact: Jason Gutting, Administrator, Construction Field Services, Michigan Department of Transportation, 517-322-1085, [GuttingJ@michigan.gov](mailto:GuttingJ@michigan.gov).

1. **Compensation:** Yes.
2. **Method:** We do not provide compensation. We will repair/repave the road as part of the project.
3. **Written policy:** No.
4. **Statute:** No.
5. **Complaints:** No.
6. **Considered changing method:** No.
7. **Considered implementing reimbursement policy:** N/A.

## Minnesota

Contact: Tim Andersen, Pavement Design Engineer, Minnesota Department of Transportation, 651-366-5455, [Timothy.Lee.Andersen@state.mn.us](mailto:Timothy.Lee.Andersen@state.mn.us).

1. **Compensation:** Yes.
2. **Method:** Yes. MnDOT uses a gas tax method: Gas Tax Income Generated by the Detour = ADT [average daily traffic] of traffic diverted x Length of detour (miles) x Duration (days) x 0.00513. See [Appendix C](#), [Appendix D](#), [Appendix E](#), [Appendix F](#), [Appendix G](#) and [Appendix H](#).
3. **Written policy:** Yes. See [Appendix C](#), [Appendix D](#), [Appendix E](#), [Appendix F](#), [Appendix G](#) and [Appendix H](#).
4. **Statute:** Yes. See [Appendix C](#), [Appendix D](#), [Appendix E](#), [Appendix F](#), [Appendix G](#) and [Appendix H](#).
5. **Complaints:** Yes. Some local governments are concerned that they are being undercompensated.
6. **Considered changing method:** Yes.
7. **Considered implementing reimbursement policy:** N/A.

## Missouri

Contact: David Ahlvers, State Engineer, Construction and Materials, Missouri Department of Transportation, 573-751-7455, [David.Ahlvers@modot.mo.gov](mailto:David.Ahlvers@modot.mo.gov).

1. **Compensation:** No.
2. **Method:** N/A.
3. **Written policy:** N/A.
4. **Statute:** N/A.
5. **Complaints:** N/A.
6. **Considered changing method:** N/A.
7. **Considered implementing reimbursement policy:** Yes. MoDOT detours only on state routes. In special situations we will do a formal agreement to compensate cities and counties during the design phase of the contract.

## Nebraska

Contact: Jim Knott, State Construction Engineer, Construction Division, Nebraska Department of Transportation, 402-479-4535, [Jim.Knott@nebraska.gov](mailto:Jim.Knott@nebraska.gov).

1. **Compensation:** Yes.
2. **Method:** NDOT is responsible for fixing the roads used as detours for damage cause[d] during use.
3. **Written policy:** Yes (<http://nebraskalegislature.gov/laws/statutes.php?statute=39-1347>): At the time of the termination of the use of such road or street as a state highway, the same shall be returned to the responsibility of the primary authority in as good condition as it was at the time of said temporary taking for use as a state highway by the department. [See **Related Resource** below.]
4. **Statute:** Yes. <http://nebraskalegislature.gov/laws/statutes.php?statute=39-1347>
5. **Complaints:** No.
6. **Considered changing method:** No.
7. **Considered implementing reimbursement policy:** N/A.

## Related Resource

**Nebraska Revised Statute 39-1347: County Roads; City and Village Streets; Authority to Use for Detour; Duties of Department**, Nebraska Legislature, undated.

<http://nebraskalegislature.gov/laws/statutes.php?statute=39-1347>

This statute addresses the use of any road or street as a detour for the state highway system.

## New Hampshire

Contact: Theodore Kitsis, Administrator, Construction, New Hampshire Department of Transportation, 603-271-2571, [Ted.Kitsis@dot.nh.gov](mailto:Ted.Kitsis@dot.nh.gov).

1. **Compensation:** No.
2. **Method:** N/A.
3. **Written policy:** N/A.
4. **Statute:** N/A.
5. **Complaints:** N/A.
6. **Considered changing method:** N/A.
7. **Considered implementing reimbursement policy:** No. We do however sometimes repave a section of local road if we need to use it for a detour. No formal policy exists for the repaving.

## Oklahoma

Contact: Shannon Sheffert, Division Engineer, Local Government Division, Oklahoma Department of Transportation, 405-521-2553, [SSheffert@odot.org](mailto:SSheffert@odot.org).

1. **Compensation:** No.
2. **Method:** N/A.
3. **Written policy:** N/A.
4. **Statute:** N/A.
5. **Complaints:** N/A.
6. **Considered changing method:** N/A.
7. **Considered implementing reimbursement policy:** No. We have on occasion paved or improved a local road designated as a detour for the benefit of the department and the local agency and the public.

## Oregon

Contact: Joe Squire, State Construction and Materials Engineer, Oregon Department of Transportation, 503-986-3123, [Joe.Squire@odot.state.or.us](mailto:Joe.Squire@odot.state.or.us).

1. **Compensation:** No.
2. **Method:** N/A.
3. **Written policy:** N/A.
4. **Statute:** N/A.
5. **Complaints:** N/A.

6. **Considered changing method:** N/A.
7. **Considered implementing reimbursement policy:** Yes. Related to [question] 2, it depends, if the answers were Y, N, and sometime case by case, I would have answered sometimes. Typically ODOT may include the local road in the project if it is designated in the project as a detour route for truck traffic.

### **South Carolina**

Contact: Todd Steagall, Director, Construction, South Carolina Department of Transportation, 803-737-1308, [SteagallRT@scdot.org](mailto:SteagallRT@scdot.org).

1. **Compensation:** No.
2. **Method:** N/A.
3. **Written policy:** N/A.
4. **Statute:** N/A.
5. **Complaints:** N/A.
6. **Considered changing method:** N/A.
7. **Considered implementing reimbursement policy:** No. If we use a local road and damage it, we fix it under our contracts.

### **South Dakota**

Contact: Jeff Senst, Aberdeen Regional Manager, South Dakota Department of Transportation, 605-626-2244, [Jeff.Senst@state.sd.us](mailto:Jeff.Senst@state.sd.us).

1. **Compensation:** Yes.
2. **Method:** South Dakota inspects the roads afterwards, and make[s] repairs at no cost to the local government (the contractor pays 50 percent of the cost for this, and South Dakota 50 percent).
3. **Written policy:** Yes. For more information, contact Jason Humphrey, 605-773-4391, [Jason.Humphrey@state.sd.us](mailto:Jason.Humphrey@state.sd.us). (CTC was unable to reach Humphrey.)
4. **Statute:** No.
5. **Complaints:** Yes. Sometimes the local government will want a thicker overlay, and sometimes contractors want to do less (or something different).
6. **Considered changing method:** Don't know—contact Jason Humphrey for more information.
7. **Considered implementing reimbursement policy:** No.

### **Utah**

Contact: Rob Wight, Director, Construction, Utah Department of Transportation, 801-633-6252, [RWight@utah.gov](mailto:RWight@utah.gov).

1. **Compensation:** No.
2. **Method:** N/A.
3. **Written policy:** N/A.
4. **Statute:** N/A.
5. **Complaints:** N/A.

6. **Considered changing method:** N/A.
7. **Considered implementing reimbursement policy:** Yes. We don't have a policy, but in some cases a contractor will trade road repairs on a local road for permission to use the road as a haul route. We have left that up to the contractor.

### Virginia

Contact: Ian Millikan, Assistant State Construction Engineer, Construction Division, Virginia Department of Transportation, 804-786-2045, [Ian.Millikan@vdot.virginia.gov](mailto:Ian.Millikan@vdot.virginia.gov).

1. **Compensation:** No.
2. **Method:** N/A.
3. **Written policy:** N/A.
4. **Statute:** N/A.
5. **Complaints:** N/A.
6. **Considered changing method:** N/A.
7. **Considered implementing reimbursement policy:** No. The Commonwealth of Virginia owns and maintains its secondary road system so this is generally not a concern in our state.

### West Virginia

Contact: Jason Boyd, Division Director, Contract Administration, Division of Highways, West Virginia Department of Transportation, 304-558-3304, [Jason.M.Boyd@wv.gov](mailto:Jason.M.Boyd@wv.gov).

1. **Compensation:** No.
2. **Method:** N/A.
3. **Written policy:** N/A.
4. **Statute:** N/A.
5. **Complaints:** N/A.
6. **Considered changing method:** N/A.
7. **Considered implementing reimbursement policy:** No. West Virginia DOH [Division of Highways] maintains almost all roadways in the state (96%). This is the reason for not having a policy to deal with local roads, as we are the entity controlling them.

### Wisconsin

Contact: Tom Buchholz, Program Manager, Wisconsin Department of Transportation, 920-360-6042, [Tom.Buchholz@dot.wi.gov](mailto:Tom.Buchholz@dot.wi.gov).

1. **Compensation:** No.
2. **Method:** N/A.
3. **Written policy:** N/A.
4. **Statute:** N/A.
5. **Complaints:** N/A.
6. **Considered changing method:** N/A.
7. **Considered implementing reimbursement policy:** No.



## **Wyoming**

Contact: Andy Long, State Construction Engineer, State Construction Office, Wyoming Department of Transportation, 307-777-4425, [Andy.Long@wyo.gov](mailto:Andy.Long@wyo.gov).

1. **Compensation:** Yes.
2. **Method:** On occasion we do an overlay on the road afterwards. We don't do this on all projects. We meet with the city, determine the condition of [the] road, and make sure we leave [the] road in no worse condition.
3. **Written policy:** No.
4. **Statute:** No.
5. **Complaints:** In some cases cities have asked for additional road user costs and we've agreed, but this happens rarely.
6. **Considered changing method:** No.
7. **Considered implementing reimbursement policy:** N/A.



Title		Policy No.
<b>Temporary Closure of Primary Highways and Establishment and Revocation of Detours</b>		<b>600.05</b>
Responsible Office		Related Policies and Procedures
Statewide Operations Bureau		500.05, 610.03, 610.17
Effective/Revision Dates	Approval(s)	
4-1-81/ 2-27-06	Kevin M. Mahoney	

**Authority:** Director of the Highway Division in accordance with Iowa Code sections 306.41, 313.28 and 313.29.

**Contents:** This policy establishes the procedures for temporarily closing a primary highway due to construction, reconstruction, maintenance or natural disasters and other emergencies; for designating, implementing and removing a detour over a primary route or over a secondary road or city street; and for determining the restoration and compensation due the county or city for the use of its road or street as a temporary primary road detour.

**Affected Offices:** District Offices; Offices of Bridges and Structures, Local Systems, Maintenance, Transportation Data, and Traffic and Safety.

**Who to Contact for Policy Questions:** District Offices; Offices of Local Systems or Traffic and Safety.

**Definitions:** None.

**Forms:**

- 810012 - Agreement for Use of Local Agency Roads as Detours
- 810042 - Detour Revocation Information Sheet

**Policy and Procedure:**

**I. General**

- A. The Department, as provided in Iowa Code section 306.41, may temporarily close sections of a primary highway when reasonably necessary due to construction, reconstruction, maintenance, or natural disaster. A route closed for over 48 hours must have a designated detour route.
- B. Iowa Code sections 313.28 and 313.29 authorize the Department to use secondary roads and city streets as temporary primary road detours.
  - 1. Secondary roads and city streets must be maintained as primary roads during their use as temporary primary road detours.
  - 2. After such use, the Department must either restore the secondary roads and city streets to as good a condition as existed prior to their use as detours, or determine and reimburse such amount as will adequately compensate the counties and cities for the added detour traffic.
- C. The decision to close a primary route due to construction, reconstruction or maintenance is made during project development. A tentative detour route is selected at that time. Action to temporarily close the primary route and to establish, implement, and revoke the

detour depends on whether the detour is entirely on primary routes (see **Section II.** of this policy) or involves sections of secondary roads or city streets (see **Section III.** of this policy).

- D. Natural disasters or other emergencies may necessitate the closing of a primary highway with little or no warning. Reasons for closure include but are not limited to physical blockage of the traveled way or damage to a structure that renders it unsafe for vehicles. See **Section IV.** of this policy.

## **II. Detour Routes on Primary Highways**

### **Implementation of Detour**

A. The district office shall:

1. Evaluate potential detour routes and, at least 60 days prior to the date of the project letting, obtain Staff Action approval in accordance with Policy No. 300.02 to authorize temporary closure of the primary highway and establishment of the detour route. The Staff Action shall include:
  - a. A description of the proposed route, the out-of-distance travel for vehicles, provisions for special signing at primary intersections in the general vicinity of the project, and the estimated dates that the detour will be implemented and removed.
  - b. If applicable, the reasons for selecting an all-primary detour route when secondary and/or city routes are available that obviously offer shorter out-of-distance travel.
  - c. A statement that upon completion of the work and removal of detour signing, the detour designation is automatically revoked.
2. Provide traffic control devices (signing, pavement markings, etc.) for the detour in accordance with the Manual on Uniform Traffic Control Devices. Order all special signs needed.
3. Enter the closure and detour information into the Condition Acquisition and Reporting System (CARS/511). Entry into CARS/511 will generate notification to the Offices of Motor Carrier Services and Motor Vehicle Enforcement.
4. Issue a news release(s) notifying the public of the detour.
5. Periodically review the detour to assure satisfactory operation.

### **Removal of Detour**

B. When the need for the detour has ceased, the district office shall:

1. Remove the traffic controls that were placed to direct traffic over the detour route.
2. Enter information terminating the closure and detour into the Condition Acquisition and Reporting System (CARS/511). Entry into CARS/511 will generate notification to the Offices of Motor Carrier Services and Motor Vehicle Enforcement.

3. Issue a news release(s) notifying the public of termination of the detour.

### **III. Detour Routes on Secondary Roads and City Streets**

#### **Implementation of Detour**

##### **A. The district office shall:**

1. At least 60 days prior to project letting, obtain an agreement with each affected county or city for the use of its non-primary road or street as a temporary primary road detour.
  - a. Form 810012 shall be used for this purpose. However, this form is not needed for a detour route over a city street if the detour has been designated and the maintenance responsibility has been agreed upon as a part of the preconstruction agreement between the Department and the city (see Policy No. 500.05).
  - b. The structural composition of the non-primary segments of the detour shall be documented at this time.
2. In accordance with Policy No. 300.02, obtain Staff Action approval to authorize temporary closure of the primary highway and establishment of the detour route. The Staff Action shall include the following statement: Upon completion of the work and removal of detour signing, the local roads designated as a primary road detour shall revert to county or city jurisdiction responsibility.

**Note:** Another Staff Action will be prepared following removal of the detour and negotiations with affected counties and cities to authorize compensation to them for the added detour traffic. See **Section III.D.5**.

3. Arrange for a pre-use inspection of each non-primary detour segment with the appropriate county engineer or city representative, and document the visual condition of the route.

##### **B. The district office shall:**

1. Unless otherwise provided for by the agreement, provide traffic control devices (signing, pavement markings, etc.) for the detour in accordance with the Manual on Uniform Traffic Control Devices, order all special signs needed, and maintain the non-primary segments of the detour.
2. Enter the closure and detour information into the Condition Acquisition and Reporting System (CARS/511). Entry into CARS/511 will generate notification to the Offices of Motor Carrier Services and Motor Vehicle Enforcement.
3. Issue a news release(s) notifying the public of the detour.
4. Periodically review the detour to assure satisfactory operation.

## **Removal of Detour**

### C. The district office shall:

1. Unless otherwise provided for by agreement, remove the traffic controls that were placed to direct traffic over the detour route once the need for the detour has ceased.

Warning and regulatory signing and other appurtenances placed on a secondary road or city street during its use as a temporary primary road detour shall generally be left in place unless other arrangements have been agreed to with the governing agency.

2. Enter information terminating the closure and detour into the Condition Acquisition and Reporting System (CARS/511). Entry into CARS/511 will generate notification to the Offices of Motor Carrier Services and Motor Vehicle Enforcement.
3. Issue a news release(s) notifying the public of termination of the detour.
4. As soon as practical, arrange for a post-use inspection of each non-primary detour segment with the appropriate county engineer or city representative for the purpose of agreeing to the extent of repairs needed to restore the secondary road or city street, as nearly as possible, to as good a condition as it was prior to its designation as a temporary primary road detour.

## **Compensation**

### D. The district office shall:

1. Using the gas tax method set out in **Appendix A**, calculate the amount of compensation due each affected county and city for the added detour traffic.
2. Within 30 days after the post-use inspection, offer each affected county and city a settlement amount based on the gas tax method, inform them of the alternate method described in **Appendix B**, and ask them to respond within 60 days, either accepting the gas tax method offer or requesting use of the alternate method.
3. If a county or city requests the alternate method, ask it to provide as soon as possible but no later than 6 months from the date of its response, documentation of the damage caused by the primary traffic on the detour and the estimated cost to repair it. Then review the damage documentation and estimated cost provided by the county or city for reasonableness.
4. Once negotiations are complete and an agreement is reached with a county or city, complete Form 810042. This form is used to summarize the detour history, document the compensation offered, and indicate acceptance of the offered compensation by the local jurisdiction.
5. In accordance with Policy No. 300.02, obtain Staff Action approval to authorize compensation to the local jurisdiction.

#### **IV. Closing Primary Highways Due to Natural Disasters or Other Emergencies**

- A. The highway maintenance supervisor will normally be the Departmental representative that must make an immediate assessment of the situation and provide for the safe control of traffic.
  - 1. The assistance of law enforcement authorities is normally available, and the supervisor should coordinate efforts with them.
  - 2. If there is any doubt as to the safety of a structure, traffic shall not be permitted to use it until the damage is evaluated by the district office or the Office of Bridges and Structures.
  - 3. When a facility, such as a primary road extension, is subject to concurrent jurisdiction, the assessment of the emergency shall be made in consultation with the city or other agency having concurrent jurisdiction.
- B. If a highway closing is of a short duration, for only a few hours, traffic may be directed over the best available route with flag persons.
- C. If a highway closing will be of a longer duration, or if a structure is damaged and there is any doubt as to its safety, the highway maintenance supervisor shall contact the district office as soon as possible.
- D. The district office shall assess the situation and initiate action to provide for the safe control of traffic for the expected duration of the closure.
- E. If primary highway traffic is directed over secondary roads or city streets, the district office shall notify the appropriate local authorities as soon as practical.
- F. If the duration of the highway closure warrants, the district office shall initiate action in accord with **Section II.** or **Section III.** of this policy and enter the closure and detour information into the Condition Acquisition and Reporting System (CARS/511).

See also, Policy No. 610.17, *Traffic Control on Interstate Highways during Emergencies*, and Maintenance IM 1.257, *Emergency Notifications Between Field and Central Offices*.

## Appendix A Gas Tax Method

The gas tax method is based on Iowa Highway Research Board IHRB Project TR-470, titled "Development of a Method to Determine Pavement Damage Due to Detours." The gas tax method compensates a county or city for the use of its non-primary road or street as a temporary primary road detour. It is based on gas tax income earned by the detoured traffic during the detour. This method has no direct relationship to damage. The compensation under the gas tax method is calculated as follows:

$$\text{Gas Tax Method Compensation} = \text{Gas\_Tax\_Income\_Cars} + \text{Gas\_Tax\_Income\_Trucks}$$

This formula uses two components to account for car traffic and truck traffic separately. The two components are calculated as follows:

$$\text{Gas\_Tax\_Income\_Cars} = \left( \frac{\text{AADT\_Cars} \times \text{Length} \times \text{Duration}}{\text{MPG\_Cars}} \right) \times \text{Combined\_Tax\_Factor\_Cars}$$

$$\text{Gas\_Tax\_Income\_Trucks} = \left( \frac{\text{AADT\_Trucks} \times \text{Length} \times \text{Duration}}{\text{MPG\_Trucks}} \right) \times \text{Combined\_Tax\_Factor\_Trucks}$$

Where:

*AADT\_Cars* = the weighted Average Annual Daily Traffic (AADT) volume along the primary highway sections that are detoured, as shown in the latest edition of the Iowa DOT Traffic Book\* under the column headed "Passenger Cars, Vans and Pickups" plus the column headed "Motorcycles."

*AADT\_Trucks* = the weighted Average Annual Daily Traffic (AADT) volume along the primary highway sections that are detoured, as shown in the latest edition of the Iowa DOT Traffic Book\* under the column headed "Total Trucks and Buses."

- \* If an adjustment is needed due to a special circumstance, such as a seasonal adjustment to compensate for tourist traffic in a recreational area, the district office may request an adjustment from the Office of Transportation Data.

*Length* = the length, rounded to the nearest tenth of a mile, of the detour along the secondary road or city street.

*Duration* = the number of days the detour was in effect.

*MPG\_Cars* = the average fuel efficiency, rounded to the nearest miles per gallon, as shown in the latest edition of the Federal Highway Administration (FHWA) publication titled Highway Statistics, in Section V titled Roadway Extent, Characteristics and Performance, subsection titled Highway Use and Performance, Table VM-1, row titled "Average miles traveled per gallon of fuel consumed," under the column headed "Passenger Cars and Other 2-Axle 4-Tire Vehicles."

*MPG\_Trucks* = the average fuel efficiency, rounded to the nearest miles per gallon, as shown in the same table and row described under *MPG\_Cars* above, under the column headed "Single-Unit 2-Axle 6-Tire or More and Combination Trucks."

*Combined\_Tax\_Factor\_Cars* = the sum of the State and Federal components of the gasoline tax, rounded to the nearest cent per gallon, that are assumed to be available for highway construction and maintenance projects on the primary road system. The State and Federal components of the gasoline tax are calculated as follows:

$$State\_Gas\_Tax\_Component = (State\_Gas\_Tax) \times (Percent\_RUTF) \times (Percent\_PRF)$$

Where:

*State\_Gas\_Tax* = the State tax rate on gasoline, per Code of Iowa subsection 452A.3(1);

*Percent\_RUTF* = the percentage of the Road Use Tax Fund (RUTF) allocated to the Primary Road Fund, per Code of Iowa section 312.2; and

*Percent\_PRF* = the percentage of the Primary Road Fund (PRF) that is used for highway construction and maintenance projects. This percentage is approximated by adding the total amount programmed for the Highway Improvement Program and the total programmed amount for maintenance projects and dividing this sum by the estimated total Primary Road Fund receipts. These figures are based on estimates as shown in the current Iowa Transportation Improvement Program.

$$Federal\_Gas\_Tax\_Component = (Federal\_Gas\_Tax) \times (Percent\_FA\_Primary)$$

Where:

*Federal\_Gas\_Tax* = the portion of the Federal gasoline tax that goes toward the Highway Trust Fund, Highway Account, as shown in the latest edition of the FHWA publication titled Highway Statistics, in Section I titled Motor Fuel, subsection titled Rates and Revenues, Table FE-21B titled Federal Highway User Fees; and

*Percent\_FA\_Primary* = the percentage of all Federal-Aid highway funds apportioned to Iowa for use on non-Interstate primary roads. This percentage is approximated by adding the Federal funds apportioned to the National Highway System (NHS) program and the portion of Surface Transportation Program (STP) funds used on primary highways and dividing this sum by the total amount of Federal-aid highway funds apportioned to Iowa. These figures are based on estimates for the current Federal fiscal year.

*Combined\_Tax\_Factor\_Trucks* = the sum of the State and Federal components of the diesel tax, rounded to the nearest cent per gallon, that are assumed to be available for highway construction and maintenance projects on the primary road system. The State and Federal components of the diesel tax are calculated as follows:

$$State\_Diesel\_Tax\_Component = (State\_Diesel\_Tax) \times (Percent\_RUTF) \times (Percent\_PRF)$$

Where:

*State\_Diesel\_Tax* = the State tax rate on diesel, per Code of Iowa subsection 452A.3(3); and

*Percent\_RUTF* and *Percent\_PRF* are as defined above.



$$\text{Federal\_Diesel\_Tax\_Component} = (\text{Federal\_Diesel\_Tax}) \times (\text{Percent\_FA\_Primary})$$

Where:

*Federal\_Diesel\_Tax* = the portion of the Federal diesel tax that goes toward the Highway Trust Fund, Highway Account, as shown in the latest edition of the FHWA publication titled Highway Statistics, in Section I titled Motor Fuel, subsection titled Rates and Revenues, Table FE-21B titled Federal Highway User Fees; and

*Percent\_FA\_Primary* is as defined above.

**Note:** The Office of Local Systems has provided a Microsoft Excel spreadsheet for calculating the detour compensation using the gas tax method. This spreadsheet will be updated on January 1 of each year, based on the most current data available. The spreadsheet will also be updated during the year if legislation affects the combined tax factors. The spreadsheet is available at: W:\Highway\Local Systems\PPM\600.05 Detour Policy\ PPM 600 05 Gas Tax Method Calculation.xls.

### **Example #1:**

#### Detour Information:

Detour length = 2.6 miles on County road

Detour Duration = 234 days

Primary Traffic = ADT = 4,390

Cars, Vans, Pickups, Motorcycles = 3,940

Trucks, Buses = 450

#### Gas Tax Calculations:

$$\text{Combined\_Tax\_Factor\_Cars} = (0.2070 \times 0.475 \times 0.50) + (0.1544 \times 0.27) = 0.09$$

$$\text{Combined\_Tax\_Factor\_Trucks} = (0.2250 \times 0.475 \times 0.50) + (0.2144 \times 0.27) = 0.11$$

$$\text{Gas\_Tax\_Income\_Cars} = \frac{3,940 \times 2.6 \times 234}{20} \times 0.09 = \$10,787$$

$$\text{Gas\_Tax\_Income\_Trucks} = \frac{450 \times 2.6 \times 234}{7} \times 0.11 = \$4,302$$

$$\text{Gas Tax Method Compensation} = \$10,787 + \$4,302 = \underline{\underline{\$15,089}}$$

## **Appendix B**

### **Alternate Method**

Upon completion of the detour, the county or city may request compensation based on the alternate method. The alternate method requires the county or city to provide detailed documentation of the damage that occurred on the secondary road or city street due to the detoured primary highway traffic. Using that documentation, the county or city must prepare a cost estimate to repair the damage in order to restore the detour route to its pre-detour condition. The district office shall review the damage and estimated cost for reasonableness.

Once agreement is reached, the district office shall provide compensation to the county or city based on the estimated cost to repair the road or street to its pre-detour condition, plus the calculated value determined from the *Gas\_Tax\_Income\_Trucks* component of the gas tax method formula, as described in **Appendix A**.

#### **Example #2:**

Under Example #1, the county chooses the alternate method since there was an area of considerable damage. The county provided documentation for the repairable damage and estimated the cost to fix it as \$31,878. The district agreed with the damage and estimated cost. The alternative payment would be calculated as:

$$\begin{aligned}\text{Alternate Method Compensation} &= \textit{Gas\_Tax\_Income\_Trucks} + \text{repairable damage estimates} \\ &= \$4,302 + \$31,878 \\ &= \underline{\$36,180}\end{aligned}$$

# Appendix C

## Detours

Two Technical Memorandums cover detours: Detour Restoration Road Life Analysis Using the Equivalent Overlay Method, No. 13-19-MAT-01, which is currently active, and Revised Detour Restoration Road Life Formula for the Gas Tax Method, No. 10-09-TS-03, which is currently expired and is included in the Cost Participation Policy Manual. Most MnDOT District Offices use the Gas Tax Method when computing payments to local units of government for detours.

The Cost Participation Policy Manual also covers the reimbursement to local units of government for unofficial detours. Technical Memorandum No. 97-29-TS-01, Township Road Unofficial Detour Policy, has expired and has been put into the Cost Participation Policy Manual.

## Cost Participation and Maintenance Responsibilities with Local Units of Government Manual

Relevant parts of the manual:

### III.B.2. Detour (Page 60)

This type of agreement is written with another road authority for a local roadway that the district has decided to use as an official detour route, in accordance with Minnesota Statutes §161.25 “Temporary Trunk Highway Detour; Haul Road.” The districts involve all appropriate road authorities in the selection of an official detour route. Once established, the detour will become a temporary trunk highway for the duration of the detour. The detour route and payments are determined in accordance with the 1991 Detour Management Study Report and updated by Technical Memorandum No. 10-09-TS-03 and as follows:

Gas Tax Income Generated by the Detour = ADT of traffic diverted x Length of detour (miles) x Duration (days) x 0.00513

The District will write simple detour agreements. The Cooperative Agreements Unit will write complex detour agreements. The Cooperative Agreements Unit will encumber the funds and make the payment for all detour agreements. The District will inform the local unit of government of the removal of detour signing and the duration of the detour. No agreement is written for less than \$500.

### III.B.3. Unofficial Detour (Page 61)

This type of agreement is written with a local unit of government, most often a township, to allow MnDOT to compensate them for increased maintenance costs, over and above the average expenditures, associated with local or through-traffic using local roads rather than an official detour route that was established as part of a construction or reconstruction project. Increased costs of maintenance on the local roadway, not including improvement costs, are documented by the local road

authority and submitted to the MnDOT district for payment consideration. If the district concurs in the additional costs, an unofficial detour agreement is written to provide payment to the local road authority. If MnDOT and the local road authority cannot agree upon the amount of additional maintenance costs that should be paid, the "Gas Tax Method," used for determining payment for a detour placed on paved roadways, may be used. The average daily traffic volume is used in the Gas Tax Method calculation and is limited to 25% of the traffic volumes diverted from the detoured trunk highway. An agreement or payment will not be written for less than \$500. Unofficial Detour Agreements are written by either the District or the Cooperative Agreements Unit in MnDOT's Office of Project Management and Technical Support.

## **Haul Roads**

Payments to local units of government for designated haul roads are not covered under Minnesota statutes, however, they are covered under MnDOT Specification 2051 of Minnesota Standard Specifications for Construction.

### For invisible damage:

Local units of government are reimbursed for haul road use on bituminous roadways with a spring load capacity of less than 9 tons. This is paid at a rate of \$0.01 per ton per mile of material hauled. No reimbursement is made for gravel and concrete roadways.

### For visible damage:

Local units of government are reimbursed based on predetermined unit prices as listed in MnDOT's Special Provisions (2051) to be paid as extra work with the contractor and MnDOT sharing equally in the costs.

## **Minnesota County Engineers Association (MCEA)**

The MCEA board of directors expressed a desire to revisit the formula and policy/agreements for official and unofficial detours and for haul roads. Some of the comments included:

- Should review/update the equation and multiplier for compensation.
- Compensation does not necessarily match the damage.
- ADT might not be the best methodology in determining impact and compensation.
- Who is responsible/liable for the detoured road after MnDOT takes over temporary ownership of it?

# Appendix D



## COST PARTICIPATION

FOR COOPERATIVE CONSTRUCTION PROJECTS AND  
MAINTENANCE RESPONSIBILITIES BETWEEN MNDOT AND  
LOCAL UNITS OF GOVERNMENT

POLICY FM011, EFFECTIVE 2016-02-24

### POLICY STATEMENT

---

The policy provides a framework to determine the potential expenditure of trunk highway funds on elements of cooperative construction projects and maintenance. The basis of this policy is that Minnesota Department of Transportation (MnDOT) participation is limited to trunk highway purposes.

This policy is for internal MnDOT purposes only, and does not provide any claim or expectation of legal entitlement to financial participation, except where MnDOT has specifically contracted at its sole discretion for such participation. MnDOT retains the final authority to determine whether it will participate in the cost of any project.

Use this policy in conjunction with the *Cost Participation and Maintenance with Local Units of Government Manual*.

### REASON FOR POLICY

---

Where a mutual benefit and a demonstrated transportation need exist, MnDOT endorses cooperative construction projects with local units of government. MnDOT developed this policy in accordance with Minnesota statutes and rules and in coordination with applicable MnDOT policies. The Related Information section of this policy lists relevant references.

#### **Principal Points**

- MnDOT participation in cooperative construction projects and subsequent maintenance with local governments is limited to trunk highway purposes.
- Cooperative construction projects may be initiated by MnDOT requesting local participation in a trunk highway project, or by a local unit of government either:
  - Requesting improvements or otherwise indicating its willingness to share the cost of a MnDOT project; or
  - Requesting MnDOT cost participation in a locally initiated project.
- This policy is for internal MnDOT purposes only. It does not provide any claim or expectation of legal entitlement to financial participation, except where MnDOT has specifically contracted at its sole discretion for such participation. MnDOT retains the final authority to determine whether it will participate in the cost of any project.

### SENIOR OFFICER

---

#### **Tracy Hatch**

*Deputy Commissioner/CFO/COO*

### POLICY OWNERS

---

#### **Mark Gieseke, P.E.**

*Director, Office of Transportation System Management*

#### **Thomas Styrbicki, P.E.**

*Director, Office of Project Management & Technical Support*

### POLICY CONTACT

---

#### **Maryanne Kelly-Sonnek, P.E.**

*Municipal Agreements Engineer  
Office of Project Management & Technical Support*

[maryanne.kellysonnek@state.mn.us](mailto:maryanne.kellysonnek@state.mn.us)  
651-366-4634

### POLICY HISTORY

---

*1985-08-07, Established  
2001-06-xx, Revision 1  
2004-04-xx, Revision 2  
2014-02-14, Revision 3  
2016-02-24, Revision 4*

[MnDOT Policy Website](#)

### **Application of Policy**

- This policy applies to all trunk highway funds, and in particular, funds in the State Road Construction (SRC) account. The SRC account is comprised of federal aid funds made available to MnDOT and state funds dedicated to the trunk highway fund. All funds allocated to the State Road Construction account are subject to requirements and restrictions of the account, specifically that funds are for trunk highway purposes only, regardless of the original source of the funds.
- This policy applies to the determination of:
  - Extent to which a local unit of government funding participation is necessary for portions of a MnDOT initiated trunk highway construction project;
  - Extent to which MnDOT may participate in a locally initiated project that affects the trunk highway system;
  - Maintenance responsibilities resulting from the cooperative construction project

### **Scope of Policy**

- MnDOT participation, in accordance with this policy, is limited to the project scope necessary to address the trunk highway purposes as determined by the district and approved as required. Costs for items requested by local units of government, beyond those determined as necessary by the district, will be the responsibility of the local unit of government.
- This policy is for application to MnDOT projects. MnDOT's cost participation identified in this policy may also apply to locally initiated projects, with eligible trunk highway items. Refer to the [Manual](#) Section II.A. "Definition of Scope" for details regarding MnDOT participation in locally initiated projects.  
Further clarification of cost participation for MnDOT special funding programs are a part of the program criteria.

## **WHO NEEDS TO KNOW THIS POLICY?**

---

- MnDOT personnel and local agency representatives involved in determining funding sources, planning, and executing agreements for cooperative construction projects between MnDOT and local units of government.
- Anyone involved in planning, designing, constructing or maintaining a MnDOT or local federal-aid project, including but not limited to: MnDOT personnel, local agency representatives, and consultants.

## **DEFINITIONS**

---

### **Cooperative Construction Agreement**

A cooperative construction agreement is an agreement between MnDOT and a local unit of government pursuant to [Minnesota Statutes §161.20](#) *General Powers of Commissioner*, [Minnesota Statutes §161.38](#) *Special Agreements for Highways in Municipalities*, [Minnesota Statutes §161.45](#) *Utility on Highway Right-of-Way; Relocation*, concerning construction or maintenance in which both parties have an interest.

### **Cooperative Construction Project**

A cooperative construction project that includes trunk highway and local road improvements in which costs or maintenance responsibilities are shared between MnDOT and local units of government.

### **Locally initiated Project**

A local initiated transportation project is a project in which the need, scope, or means to accomplish the project is predominantly a determination of and priority for the local unit of government.

### **MnDOT initiated Project**

A MnDOT initiated transportation project is a project in which the need, scope, or means to accomplish the project is predominantly a determination of and priority for MnDOT.

### **State Road Construction**

State road construction is the actual construction, reconstruction, and improvement of trunk highways, including right-of-way.

### **State Road Construction Account (SRC)**

The State Road Construction Account is the biennial appropriation of funds by the legislature for trunk highway purposes only. This appropriation is comprised of federal aid funds made available to MnDOT and state funds dedicated to the trunk highway fund. All funds allocated to the SRC are subject to requirements and restrictions of the account, specifically that funds are for trunk highway purposes only, regardless of the original source of the funds.

### **State Transportation Improvement Program (STIP)**

The STIP is a federally required document that provides a list of transportation projects that are expected to be funded with federal transportation dollars within a four-year window. This list of projects includes state and local transportation projects funded with federal highway or federal transit funds. Minnesota also includes most projects on the state trunk highway system regardless of funding source (federal or state). Rail, port, and aeronautic projects are included for information purposes. Refer to the website for details, [State Transportation Improvement Program](#).

### **Trunk Highway Fund**

This fund is the principal operating fund for MnDOT and to some extent for the Minnesota State Patrol at the Department of Public Safety. It is a governmental fund that accounts for public monies used to construct, improve, and maintain Minnesota's trunk highway transportation infrastructure. Annual transfers of funds to Minnesota Management & Budget (MMB) for Trunk Highway-related debt service are from this fund.

### **Trunk Highway System**

All roads established or to be established under the provisions of [Constitution of the State of Minnesota, Article XIV, section 2](#). This system includes highways that are constructed, improved, and maintained as public highways under the jurisdiction of the Commissioner of Transportation, including highways on the Interstate system.

## **PROCEDURES**

---

### ***Application of Policy and Procedures***

Application and procedures related to this policy are in the [Manual](#). The Manual includes details for applying the policy to projects for cost participation and maintenance responsibilities, methods for computing cost shares, and relevant agreement procedures. To understand the policy, the procedures, and to avoid misinterpretation, use the Policy and Manual documents together.

### ***Exceptions to Policy***

Districts must document exceptions to this policy. The district engineer will submit that justification to the Cooperative Agreements Unit, which forwards the request to the Assistant Commissioner for Engineering Services Division and the Assistant Commissioner for Operations Division for concurrence, then to the Chief Financial Officer for approval. The merits of such requests will be determined on a case-by-case basis. Exceptions will be granted for project work that meets trunk highway purposes and is eligible for trunk highway expenditures.

### ***Enforcement of Policy***

- MnDOT districts work with the MnDOT Cooperative Agreements Unit to apply this policy to projects.
- The MnDOT Cooperative Agreements Unit makes the final determination of cost participation responsibilities, in cooperation with the district, during the agreement development process.
- Final cost participation and maintenance responsibilities appear in cooperative agreements between MnDOT and local units of government, for each project.

## **RESPONSIBILITIES**

---

### **Office of Transportation System Management (Central Office)**

- **Funding Program Coordinator** – The Funding Program Coordinator serves as a liaison and assures compliance and oversight for application of this policy.
- **STIP Coordinator** - Works with districts to ensure that cost estimates for MnDOT and local shares of projects are correctly identified in the State Transportation Improvement Program (STIP) and that appropriate anticipated funding sources are identified for each participating agency share.

### **Chief Financial Officer and the Office of Financial Management (Central Office)**

- The Office of Financial Management provides financial oversight and makes determinations on trunk highway purpose where there is no precedence or clarity.
- The Chief Financial Officer is ultimately responsible for interpreting trunk highway purpose as stated in the Constitution and state law and assuring MnDOT is compliant.

### **Office of Project Management and Technical Support (Central Office)**

- **Municipal Agreements Engineer** – The Municipal Agreements Engineer serves as a liaison and assures compliance and oversight for application of this policy. The Municipal Agreements Engineer also ensures that construction plan information and cooperative agreement documents are consistent with the STIP, with the cost participation responsibilities developed during project development, and with this policy.
- **Cooperative Agreements Unit** – The Cooperative Agreements Unit provides assistance with application of this policy during project development as requested by the districts. They review documentation of project cost responsibilities and notify the districts of cost participation responsibilities that may be inconsistent with this policy. They also facilitate the review and approval of requests for exceptions to the application of this policy.

## **FREQUENTLY ASKED QUESTIONS**

---

### ***Q. To what funds does this policy apply?***

A: This policy applies to all trunk highway funds, and in particular, State Road Construction (SRC) account funds, including funds that have been carved out of the SRC budget for MnDOT special funding programs, such as Transportation Economic Development (TED), Safety and Mobility Interchange (SAM), and Corridor Investment Management Strategy (CIMS). The SRC account is comprised of federal aid funds made available to MnDOT and state funds dedicated to the trunk highway fund. All funds allocated to the SRC account are subject to requirements and restrictions of the account, specifically that funds may only be expended for Trunk Highway purposes, regardless of the original source of the funds. Further clarification of cost participation for MnDOT special funding programs such as TED, SAM, or CIMS are part of the program criteria.

### ***Q. Where are specific construction costs and maintenance responsibilities explained?***

A: This policy's companion [Manual](#) contains guidance for determining construction cost participation and maintenance responsibilities between MnDOT and local units of government. The Manual also includes methods for computing cost shares, information about agreements, and other relevant procedures.

### ***Q. How are trunk highway purposes defined?***

A: [Minnesota Statutes §161.20, subdivision 3](#), "The commissioner may expend trunk highway funds only for trunk highway purposes." Constitutionally, trunk highway purposes are those that are necessary to construct, improve, and maintain the trunk highway system. Engineering due diligence and justification is required to define elements of projects that meet the constitutional and statutory definitions of trunk highway purposes. The [Manual](#) provides direction regarding the MnDOT cost participation in elements that meet trunk highway purposes.

### ***Q. When should Project Managers begin determining construction cost participation and maintenance responsibilities between MnDOT and local units of government?***

A: Project Managers should determine construction cost participation and maintenance responsibilities early in the project development process, as the project scope and trunk highway purposes are determined. It is important to consider the immediate costs for construction as well as the ongoing maintenance impacts, and then document responsibilities in municipal agreements to avoid misunderstandings between MnDOT and local units of government.

### ***Q. When should Project Managers involve the Municipal Agreements Engineer?***

A: Project Managers should confer with the Municipal Agreements Engineer as cost participation amounts are being estimated, before discussing cost shares with local units of government. This initial communication should occur early in the project development process as the project scope is being determined. The Municipal Agreements Engineer will work with Project Managers to ensure that construction plan information and cooperative agreement documents are consistent with the STIP, with the cost participation responsibilities developed during project development, and with this Policy.



**Q. How does cost participation apply to Complete Streets design features?**

A. The [MnDOT Complete Streets Policy](#) requires that the principles of Complete Streets be considered by MnDOT at all phases of planning and project development in the establishment, development, operation, and maintenance of a comprehensive, integrated, and connected multimodal transportation system. As such, the inclusion of Complete Streets design features such as sidewalks, bikeways, shared use paths, and transit facilities will be determined early in the project development process. Cost participation and maintenance responsibilities for these items are in the respective sections of the [Manual](#).

**Q. How do this policy and the companion [Manual](#) determine responsibilities for ongoing snow and ice control/removal?**

A. Responsibilities for snow and ice control/removal as well as other maintenance responsibilities on trunk highway rights-of-way, including sidewalks, will be documented in cooperative construction agreements or in separate maintenance agreements. These responsibilities are determined by Districts and local units of government, in consultation with the Municipal Agreements Engineer.

**Q. If the local unit of government share of a project is less than \$5000, what is the process to apply for an exception?**

A. The [MnDOT Cooperative Agreements Unit](#) has implemented an administrative process to address these instances. If the local cost share is less than \$5000, this administrative process will allow MnDOT to pay for additional trunk highway eligible expenses without going through a formal exception process. This administrative exception process will only allow MnDOT to participate in costs for project elements that meet trunk highway purposes; local units of government will be responsible for all elements that do not meet trunk highway purposes. If the local cost share is \$5000 or greater, a cooperative construction agreement will be written.

**Q. Does a maintenance agreement need to be written if MnDOT is solely responsible for the costs of a trunk highway improvement project that affects local units of government?**

A. When MnDOT and a local unit of government share maintenance responsibilities as the result of a cooperative construction project, those responsibilities can be written into the cooperative construction agreement or documented in a separate maintenance agreement. If MnDOT maintains sole responsibility for all maintenance costs resulting from a cooperative construction project, a maintenance agreement will not be written.

## RELATED INFORMATION

---

This policy's companion [Manual](#) provides details for applying this policy to projects, methods for computing cost shares, and relevant procedures including agreements and permits.

This policy's procedures and requirements were developed in accordance with the following:

- As defined in [2013 Minnesota Laws, Chapter 117, Article 1, Section 3, subdivision \(c\) \(2\)](#), the biennial appropriation to the State Road Construction account "...is for the actual construction, reconstruction, and improvement of trunk highways, including design-build contracts and consultant usage to support these activities. This includes the cost of actual payment to landowners for lands acquired for highway right-of-way, payment to lessees, interest subsidies, and relocation expenses." This definition is subject to change with each appropriation but remains substantially constant over time.
- MnDOT's ability to expend trunk highway funds for cooperative construction projects is limited by the [Constitution of the State of Minnesota, Article XIV, section 2 and section 6](#) and by [Minnesota Statute §161.20](#).
- [Constitution of the State of Minnesota, Article XIV, section 2](#) establishes "... a trunk highway system which shall be constructed, improved and maintained as public highways of the state," and [Constitution of the State of Minnesota, Article XIV, section 6](#) establishes " ... a trunk highway fund which shall be used solely for the purposes specified in section 2 of this article."
- [Minnesota Administrative Rules §8810.3100 - 8810.3600](#), "Utilities and Equipment"
- [Minnesota Administrative Rules §8820](#), "Local State-Aid Route Standards, Financing"
- [Minnesota Statutes §161.20](#) "General Powers of the Commissioner"
- [Minnesota Statutes §161.20, subdivision 2](#), "Property acquisition; agreements and contracts"
- [Minnesota Statutes 161.20, subdivision 3](#), "Trunk highway fund appropriations"
- [Minnesota Statutes §161.21](#), "Location and Design of Highways; Cooperation with other Governmental Units"

- [Minnesota Statutes §161.24](#), *“Changes Required by Construction of Trunk Highway”*
- [Minnesota Statutes §161.25](#), *“Temporary Trunk Highway Detour; Haul Road”*
- [Minnesota Statutes §161.38, subdivision 1](#), *“Highway width or capacity”*
- [Minnesota Statutes §161.38, subdivision 3](#), *“Frontage road”*
- [Minnesota Statutes §161.38, subdivision 5](#), *“Definition of municipalities”*
- [Minnesota Statutes §161.38](#), *“Special Agreements for Highways in Municipalities”*
- [Minnesota Statutes §161.39](#), *“Aid to Other Road Authorities and State Departments”*
- [Minnesota Statutes §161.45](#), *“Utility on Highway Right-of-Way; Relocation”*
- [Minnesota Statutes §161.46](#), *“Reimbursement of Utility”*
- [Minnesota Statutes §162](#), *“State Aid Road System”*
- [Minnesota Statutes §169.04](#), *“Local Authority”*
- [Minnesota Statutes §169.35](#), *“Parking”*
- [MnDOT Complete Streets Policy](#)
- [MnDOT Contract Management Policy](#)
- [MnDOT Minnesota Tribal Nations Government-to-Government Relationship with MnDOT Policy](#)
- [MnDOT Partnership Agreements Policy](#)
- [MnDOT Utility Accommodation on Highway Right-of-Way Policy](#)

## POLICY OWNERSHIP AND AUTHORIZATION


---

### Policy Owner

Mark Gieseke, P.E., Director, Office of Transportation System Management


 2-22-16  
Signature and Date Signed

Thomas Styrbicki, P.E., Acting Director, Office of Project Management & Technical Support

 2/22/2016  
Signature and Date Signed

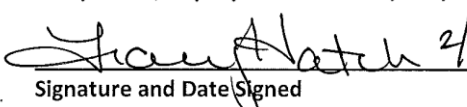
### Governance Council

Sue Stein, Assistant Commissioner, Corporate Services

 2-23-16  
Signature and Date Signed

### Responsible Senior Officer

Tracy Hatch, Deputy Commissioner/CFO/COO

 2/24/2016  
Signature and Date Signed

# Appendix E

## General Provisions

### 2051 Maintenance and Restoration of Haul Roads

#### 2051.1 DESCRIPTION

This work consists of the maintenance, repair, and restoration of designated haul roads for materials hauled for the work covered by the contract.

#### 2051.2 DEFINITIONS

The Department defines "designated haul road" as any public road or street officially designated as a haul road, except for a Minnesota trunk highway or road officially designated by the Commissioner as a detour around a construction project, over which the following materials are hauled:

- (1) Soil or other material for embankment construction,
- (2) Sand, gravel, or other material for backfill,
- (3) Sand, gravel, or crushed rock for base or surfacing courses,
- (4) Aggregates for bituminous surfacing, including hauling bituminous mixtures from the mixing plant,
- (5) Aggregates for concrete base or pavement, including hauling concrete batches from batch plants, and
- (6) Bituminous materials and portland cement for paving mixtures.

The Contractor may haul materials to the project or to other locations outside the project if required to complete the work specified in the contract.

#### 2051.3 DESIGNATION AND USE OF HAUL ROADS

If the contract specifies *Maintenance and Restoration of Haul Roads* as a contract item, do not haul material from any source until the Commissioner designates the haul road from that source as a haul road. Once the Commissioner designates the haul road from a source, haul all materials from that source over that road.

Make all vehicle trips, both loaded or unloaded, between material sources and the project on designated haul roads.

If the contract is with MnDOT for State Trunk Highway Projects, select haul roads and notify the Engineer of the selections. Within 15 calendar days after receipt of notification of the haul road selections, the Commissioner will determine the acceptability of the selected haul roads. If the haul roads are acceptable, the Commissioner will designate the roads as temporary trunk highway haul roads.

If the contract is with or for a governmental agency other than MnDOT, select a haul road and notify the Engineer representing that governmental agency of the selection. Within 15 calendar days after receipt of notification of the haul road selection, the Engineer will determine if the selected road is an acceptable road. If the road is acceptable, the Engineer will approve that road as a designated haul road.

After a haul road is officially designated, the Contractor may select a different road for official designation using the same procedure specified in this section. If the haul road designation changes and any of the above described materials were hauled over the previously designated haul road, the Contractor shall restore the previously designated haul road to the original condition.

#### **A Bituminous Roadways**

Reimburse local government agencies for haul road use on bituminous roadways in accordance with the following:

- (1) Verify spring load capacities of proposed haul roads with the local government agencies,
- (2) For a designated haul road with a bituminous surface and a spring load capacity less than 9 tons, reimburse the local government agency for haul road use at a rate of \$0.01 per ton per mile of material hauled,
- (3) Make full payment to the local government agency upon receiving notice of payment due and computations from the Engineer, and
- (4) Provide the Engineer with confirmation of payment to the local agency.

The Department will not require payment if the amount due to an individual local government agency is less than \$500.00.

The Department will not require the Contractor to reimburse local government agencies for concrete surfaced roadways.

2051.4 MAINTENANCE AND RESTORATION

While hauling operations are in progress, maintain the haul road as approved by the Engineer. This work includes application of water, bituminous material, or calcium chloride to the road surface as necessary to alleviate dust nuisance and eliminate traffic hazards.

After the completion of hauling operations over a haul road, perform one of the following:

- (1) Restore that haul road to a condition at least equal to the condition existing at the start of the hauling operations, or
- (2) Compensate the local government agency in the amount approved by the local government agency and the Engineer for the restoration of that haul road by the local government agency.

The fact that other traffic used the haul road concurrently with the Contractor's material hauling operation does not relieve the Contractor of the obligation to maintain and restore the haul road as required in this section. If other contractors, performing highway construction under a contract with the same governmental agency, haul materials over the same road concurrently with the Contractor's material hauling operation, the Engineer will determine the amount of maintenance and restoration obligation to be shared by each.

The Engineer will determine the kind and amount of maintenance and restoration work required to restore the haul road to a condition equal to the condition existing at the time the hauling operations started. The Engineer's decision is final, binding, and conclusive.

When hauling over any designated haul road is completed and the Contractor has restored the road or has compensated the governmental agency for the restoration as required, the Engineer will accept such restoration or concur in such financial settlement for the restoration of the haul road in writing, and such acceptance shall relieve the Contractor of additional obligation in connection with the restoration of the designated haul road.

2051.5 BASIS OF PAYMENT

The contract lump sum amount for *Maintenance and Restoration of Haul Roads* includes the cost of maintenance, restoration, and the reimbursement to any local government agencies as specified in this section for use of haul roads officially designated and used in conjunction with the contract work.

The Department will not make payment for *Maintenance and Restoration of Haul Roads* unless one or more haul roads were officially designated and used for hauling materials. The Department will make payment at the contract lump sum amount if these two conditions were met and regardless of the amount of maintenance and restoration work required, provided work was completed or the local government agency certified receipt of payment for such restoration.

If the Contractor fails or refuses to perform haul road restoration or to make satisfactory financial settlement for such restoration as required within the period specified by the Engineer in writing, the Department will complete the restoration work and deduct the costs from any moneys that are or may become due the Contractor or require reimbursement from the Contractor's Surety.

The Department will pay for maintenance and restoration of haul roads on the basis of the following schedule:

<b>Item No.:</b>	<b>Item:</b>	<b>Unit:</b>
2051.501	Maintenance and Restoration of Haul Roads	lump sum

# Special Provisions

## (2051) MAINTENANCE AND RESTORATION OF HAUL ROADS

*Absolutely no changes can be made to the language in this write-up!!*

**REVISED 11/20/15 ◀DO NOT REMOVE THIS. IT NEEDS TO STAY IN FOR THE CONTRACTORS.**

SP2016-65

The provisions of MnDOT 2051 are supplemented by the following:

S-1.1 In addition to the amount the Contractor bids for Item 2051.501 (Maintenance and Restoration of Haul Roads), the State agrees to reimburse the Contractor at the predetermined unit prices set forth below for materials ordered by the Engineer. All materials ordered by the Engineer for the Maintenance and Restoration of haul roads will be measured as set forth in the applicable section of the Standard Specifications.

Each of the following materials measured as provided above, will be paid for at the following predetermined unit prices:

2118.501	Aggregate Surfacing Class 1	\$7.00/ton [\$7.72/t]
2130.501	Water	\$10.00/1000 gal. [\$2.50/m <sup>3</sup> ]
2131.502	Calcium Chloride Solution	\$0.50/gal. [\$0.14/liter]
2211.501	Aggregate Base Class 5	\$7.00/ton [\$7.72/t]
2360.501	Type SP 12.5 Wearing Course Mixture (4, B)	\$27.95/ton [\$30.81/t]
2231.501	Bituminous Patching Mixture	\$47.00/ton [\$51.70/t]

Crushing will not be required in the production of Class 1 material.

The above prices will be considered to be compensation in full for furnishing and providing the materials complete in place, including, but not limited to, royalty, waste, equipment rental, labor, overhead, profit, and incidentals. When materials other than those listed above are ordered by the Engineer, they will be paid for as extra work in accordance with MnDOT 1402.5, with **the Contractor and the Department sharing equally in the costs**. Separate payment will not be made for costs of blading and reshaping necessary for the maintenance and restoration of haul roads. The cost of such work shall be incidental.

The above shall be performed to restore visible damage.

# Appendix F



MINNESOTA DEPARTMENT OF TRANSPORTATION  
Engineering Services Division  
Technical Memorandum No. 10-09-TS-03  
November 9, 2010

**To:** Electronic Distribution Recipients  
**From:** Michael A. Barnes, P.E. *Michael A. Barnes*  
Division Director, Engineering Services  
**Subject:** Revised Detour Restoration Road Life Formula for the Gas Tax Method

### Expiration

This Technical Memorandum shall continue in force until November 9, 2015.

### Implementation

This policy and its instructions are effective immediately.

### Introduction

Minnesota Statutes, Section 161.25 provides that the commissioner may designate a street or highway as a temporary trunk highway detour. Section 161.25 also provides that prior to revoking the designation, the commissioner shall restore such streets or highways to as good a condition as they were prior to the designation.

In an effort to provide for uniformity and consistency in the method for reimbursing local units of government for use of their roads as detours by Mn/DOT, a 1991 task force of Mn/DOT staff and County Engineers recommended a gas tax method formula to compute payments for the use of local government roadways used as trunk highway detours by Mn/DOT. The 1991 Detour Management Study Report is available at <http://dotapp7.dot.state.mn.us/edms/download?docId=983637>.

The gas tax method calculated the gas tax income generated by the trunk highway traffic that is detoured on to a local government roadway segment. The income generated by this traffic is made available to the owner or jurisdiction of the temporary trunk highway. Computation of the gas tax generated by the detoured traffic involves applying the gas tax paid per mile by the trunk highway-detoured traffic to the total vehicle miles traveled over the length and duration of the detour.

The gas tax method formula recommended by the 1991 task force was approved through Technical Memorandum No. 91-20-TS-02, Technical Memorandum No. 92-44-TS-02, and Technical Memorandum No. 96-06-TS-02 and has been used by Mn/DOT in calculating the cost of detour restoration since 1991.

### Purpose

The purpose of this updated Technical Memorandum is to update the existing gas tax method formula due to the increase in the State and federal fuel tax. The Gas Tax Method has been revised to incorporate the increased tax rates. This Technical Memorandum provides the current detour restoration gas tax method formula to be used for the compensation of road life usage on an official detour route.

### Guidelines

The gas tax method formula has been revised to reflect the current state and federal tax and is as follows:

Gas Tax Income Generated by the Detour =  
ADT of traffic diverted x Length of detour (miles) x Duration (days) x 0.00513

The revised gas tax formula will be used in the computation of all 2010 and future detour agreements.

-MORE-

The procedure for selecting, establishing, maintaining and removing an official detour is covered by the following and has not changed:

- Minnesota Statutes, Section 161.24, Subd. 3, detours during construction.
- Minnesota Statutes, Section 161.25, temporary trunk highway detours; haul road.
- Mn/DOT Standard Specification 1404.2 Planned Detours.
- Mn/DOT Traffic Engineering Manual Chapter 8-7.00 Establishing and Maintaining Detours <http://www.dot.state.mn.us/trafficeng/publ/tem/2009/Chapter-08.pdf>
- Mn/DOT Maintenance Manual Chapter 13 Establishing and Maintaining Detours 5-791.660.
- Mn/DOT Contract Administration Manual 5-591.365 Procedure for notifying local agency when removing detour signing <http://www.dot.state.mn.us/const/tools/docs/sec-365.pdf>
- Mn/DOT Right of Way Manual 5-491.115.6 Commissioner Orders for establishing detours [http://www.dot.state.mn.us/row/pdfs/RWManuals/RW\\_MANUAL2007.pdf](http://www.dot.state.mn.us/row/pdfs/RWManuals/RW_MANUAL2007.pdf)

### Questions

For information on the technical contents of this memorandum, please contact **Maryanne Kelly-Sonnek** at (651) 366-4634 or **Gerard Geib** at (651) 366-5496.

Any questions regarding publication of this Technical Memorandum should be referred to the Design Standards unit, [designstandards@dot.state.mn.us](mailto:designstandards@dot.state.mn.us). A link to all active and historical Technical Memoranda can be found at <http://techmemos.dot.state.mn.us/techmemo.aspx>.

To add, remove, or change your name and/or address on the Technical Memoranda mailing list, write or call the Mn/DOT Central Office Mail Room G-18 Transportation Building, 395 John Ireland Blvd., St. Paul, MN 55155, phone number (651) 366-3051.

### Attachments:

Attachment A summarizes the methodology of the gas tax method formula from the 1991 Detour Management Study Report



**Attachment A**  
**Methodology for Estimating the Tax Revenue for Detour Management**

		Current	Revised
State Fiscal Year		1990	2010
<b>State Gas Tax<sup>1</sup></b>	<b>S<sub>t</sub></b>	\$0.20	\$0.26
State's portion (share of HUTD fund allocated to TH Account after transfers to other agencies and less flex account) <sup>2</sup>		0.620	0.578
Percent available for roadbed improvement <sup>3</sup>	<b>F<sub>s</sub></b>	0.350	0.347
<b>Amount available for State's roadbed improvement</b>		<b>\$0.0434</b>	<b>\$0.0511</b>
<b>Federal Gas Tax<sup>4</sup></b>	<b>F<sub>t</sub></b>	\$0.140	\$0.184
Available for highways <sup>5</sup>		\$0.080	\$0.154
Percent available for highways on federal aid system <sup>6</sup>	<b>F<sub>f</sub></b>	0.900	0.900
Percent available for roadbed improvement <sup>3</sup>		0.350	0.414
<b>Amount available for State's roadbed improvement</b>		<b>\$0.0252</b>	<b>\$0.0575</b>
<b>Federal + State Gas Tax available for State's roadbed improvement for non-interstate trunk highway system</b>	<b>T</b>	<b>\$0.0686</b>	<b>\$0.1087</b>
Vehicle fleet fuel efficiency (miles per gallon) <sup>7</sup>		17.50	21.20
Gas Tax Factor (Fed+State Gas Tax)/(Vehicle Fleet mpg)		0.00392	0.00513
<b>Current Gas Tax Detour Formula</b>		<b>.00392 x ADT x Length (mi) x Time (days)</b>	
<b>Revised Gas Tax Detour Formula</b>		<b>.00513 x ADT x Length (mi) x Time (days)</b>	

**Notes: Reasons for number changes.**

1. Reflects the state gas tax increase in Minnesota Laws 2008, Chapter 152.
2. The percentage share is adjusted to reflect the reductions made prior to the distribution between the different funds. 1.89% is taken off the top for other agencies and collection cost. Then 5% is put into the flex account, which no longer is available for the TH fund. The 62% is applied to the funds distributed after the deductions. (Source: State of Minnesota, Revenue and Expenditures for Transportation Purposes, Mn/DOT Office of Financial Management)
3. This is based on the average of the state and federal state road construction funds used for non-interstate purposes. (Source: Mn/DOT Office of Capital Programs and Performance Measures, see calculations sheet Part 2.)
4. Reflects the federal excise tax on gasoline change in 1997. (Source: [www.fhwa.dot.gov/reports/financingfederalaid/appl.htm](http://www.fhwa.dot.gov/reports/financingfederalaid/appl.htm) - Appendix L)
5. This is net of funds deposited in the Transit account (2.86 cents) and underground leakage (0.1 cents). Source, see note 4
6. No change
7. MN Rural T.H.Total Fleet Average MPG. Calculated using the Vehicle Distribution factors obtained from the 1986-2007 Minnesota vehicle classification database along with the 2008 average mpg for various vehicle types obtained from Table VM-1 located at:

<http://www.fhwa.dot.gov/policyinformation/statistics/2008/vm1.cfm>

# Appendix G



MINNESOTA DEPARTMENT OF TRANSPORTATION  
Engineering Services Division  
Technical Memorandum No. 13-19-MAT-01  
October 28, 2013

**To:** Electronic Distribution Recipients

**From:** *sm* *AS* *MS*

**Subject:** Detour Restoration Road Life Analysis using the Equivalent Overlay Method

## Expiration

This is a new Technical Memorandum that revises the current procedure contained in the "Detour Management Study Report" dated January 1991. It will remain in effect until October 28, 2018 unless superseded prior to that date.

## Implementation

This policy and its instructions are effective immediately.

## Introduction

Minnesota Statutes, Section 161.25 provides that the commissioner may designate a street or highway as a temporary trunk highway detour. Section 161.25 also provides that prior to revoking the designation, the commissioner shall restore such streets or highways to as good a condition as they were prior to the designation.

In an effort to provide uniformity and consistency in the method of reimbursing local units of government for use of their roads as detours by MnDOT, a 1991 task force of MnDOT staff and County Engineers recommended a gas tax method formula to compute payments for the use of local government roadways used as trunk highway detours by MnDOT.

The task force also recommended that the local road authority have the option of performing an "equivalent overlay method" analysis at their expense. Testing and analysis to be done by MnDOT approved firm. Any value computed by the analysis in excess of twice the gas tax computation would be included, along with the gas tax formula value, as final payment to the local road authority. The "Detour Management Study Report" is available at <http://dotapp7.dot.state.mn.us/edms/download?docId=983637>.

The gas tax method formula and equivalent overlay method recommended by the 1991 task force were approved through Technical Memorandum No. [91-20-TS-02](#) and re-issued as Technical Memorandum No. [92-44-TS-02](#), and Technical Memorandum No. [96-06-TS-02](#). The formula used for the gas tax method was revised in Technical memorandum No. [10-09-TS-03](#).

## Purpose

The purpose of this Technical Memorandum is to update the price per inch of an overlay used in calculating the final cost of the Equivalent Overlay Method. This cost has not been updated since the original "Detour Management Study Report" dated January 1991. This document also contains the entirety of instructions for performing the equivalent overlay method analysis so that it may act as the only necessary reference to perform the equivalent overlay method analysis.

## Guidelines

### Use

The local road authority has the option of performing an "equivalent overlay method" analysis at their expense. A state-approved firm, at no cost or expense to the State, must perform the testing and analysis. Any value computed by the analysis in excess of twice the gas tax computation would be included, along with the gas tax formula value, as final payment to the local road authority.

-MORE-

This procedure is only applicable to bituminous on aggregate base pavements and full-depth bituminous pavements.

#### Introduction

The equivalent overlay method analyzes Falling Weight Deflectometer (FWD) data collected on the detour route. Based on the deflections, this method calculates the traffic capacity of the existing pavement structure. If the existing traffic capacity is less than twice the normal traffic plus the detour traffic, then an overlay thickness that will provide the required traffic capacity is calculated. A final cost is calculated from the cost of applying the calculated overlay thickness.

#### FWD Testing

The equivalent overlay method uses FWD deflection data collected from the detour route. The standard force of the FWD drops is 9,000lbs. The analysis procedure adjusts for typical minor variations in drop force to the standard 9,000lbs. The standard test interval is one tenth of a mile.

Please refer to Attachment A for instructions to calculate the equivalent overlay method analysis.

#### **Questions**

Any questions regarding the technical provisions of this Technical Memorandum can be addressed to the following:

- **Tim Andersen, Pavement Design Engineer, at (651) 366-5455**

Any questions regarding publication of this Technical Memorandum should be referred to the Design Standards Unit, [DesignStandards.DOT@state.mn.us](mailto:DesignStandards.DOT@state.mn.us). A link to all active and historical Technical Memoranda can be found at <http://techmemos.dot.state.mn.us/techmemo.aspx>.

To add, remove, or change your name on the Technical Memoranda mailing list, please visit the web page <http://techmemos.dot.state.mn.us/subscribe.aspx>

#### **Attachments:**

- A. Equivalent overlay method computations

Steps to Calculate Equivalent Overlay Income

1. Adjust the center FWD deflection (mils) to the standard drop force of 9000lbs (FWD<sub>9000</sub>).

$$\frac{9000 \text{ lbs}}{\text{Force of Drop (lbs)}} \times \text{Center Deflection (mils)} = \text{FWD}_{9000}$$

2. Convert the FWD deflection into equivalent Benkelman Beam deflections (BB)

Bituminous on Aggregate -  $BB = 1.05 \times \text{FWD}_{9000} + 5.0$

Full-Depth Bituminous -  $BB = 3.8 \times \text{FWD}_{9000}$

3. Convert the Benkelman Beam deflections (BB) into Benkelman Beam deflections at 80° F using Table 200-1.

Table 200-1

Range of Defl. (Inches)	Temperature in Degrees F				
	to 35	36-45	46-55	56-65	66-75
.000 - .010	.005	.004	.003	.002	.001
.010 - .020	.007	.006	.004	.003	.001
.020 - .030	.010	.008	.006	.004	.002
.030 - .040	.010	.008	.006	.004	.002
.040 - .050	.012	.010	.007	.005	.002
.050 - .060	.015	.012	.009	.006	.003

**\*All corrections to be added.**

4. Compute the standard deviation of all the BB of the detour segment.

5. Add twice the standard deviation of all BB to each BB<sub>80</sub>.

$$BB_{SD} = BB_{80} + 2 \times \text{Standard Deviation of all BB}$$

6. Determine the seasonal correction factor from the following tables:

<b>PLASTIC</b>									
<b>Asphalt Surface Thickness</b>	<b>Date of</b>								
	5/1	5/16	6/1	6/16	7/1	7/16	8/1	8/16	Sept.
	5/15	5/31	6/15	6/30	7/15	7/31	8/15	8/31	
< 2 in.	<b>1.12</b>	<b>1.29</b>	<b>1.44</b>	<b>1.53</b>	<b>1.60</b>	<b>1.65</b>	<b>1.69</b>	<b>1.73</b>	<b>1.79</b>
> 2 < 3½ in.	<b>1.17</b>	<b>1.34</b>	<b>1.50</b>	<b>1.59</b>	<b>1.63</b>	<b>1.67</b>	<b>1.71</b>	<b>1.73</b>	<b>1.75</b>
> 3½ < 5½ in.	<b>1.14</b>	<b>1.24</b>	<b>1.37</b>	<b>1.43</b>	<b>1.50</b>	<b>1.58</b>	<b>1.64</b>	<b>1.70</b>	<b>1.71</b>
> 5½ < 8 in.	<b>1.17</b>	<b>1.25</b>	<b>1.25</b>	<b>1.25</b>	<b>1.26</b>	<b>1.30</b>	<b>1.41</b>	<b>1.50</b>	<b>1.55</b>
> 8 in. Conventional	<b>1.13</b>	<b>1.18</b>	<b>1.16</b>	<b>1.13</b>	<b>1.15</b>	<b>1.18</b>	<b>1.29</b>	<b>1.37</b>	<b>1.45</b>
> 8 in. Full-Depth Construction	<b>1.12</b>	<b>1.16</b>	<b>1.16</b>	<b>1.10</b>	<b>1.09</b>	<b>1.15</b>	<b>1.33</b>	<b>1.46</b>	<b>1.55</b>

<b>SEMI-PLASTIC EMBANKMENTS</b>									
<b>Asphalt Surface Thickness</b>	<b>Date of</b>								
	5/1	5/16	6/1	6/16	7/1	7/16	8/1	8/16	Sept.
	5/15	5/31	6/15	6/30	7/15	7/31	8/15	8/31	
< 5 in.	<b>1.16</b>	<b>1.35</b>	<b>1.40</b>	<b>1.50</b>	<b>1.52</b>	<b>1.51</b>	<b>1.48</b>	<b>1.46</b>	<b>1.45</b>
> 5 in.	<b>1.29</b>	<b>1.40</b>	<b>1.46</b>	<b>1.50</b>	<b>1.54</b>	<b>1.58</b>	<b>1.64</b>	<b>1.69</b>	<b>1.71</b>

<b>NON-PLASTIC EMBANKMENTS</b>									
<b>Asphalt Surface Thickness</b>	<b>Date of</b>								
	5/1	5/16	6/1	6/16	7/1	7/16	8/1	8/16	Sept.
	5/15	5/31	6/15	6/30	7/15	7/31	8/15	8/31	
< 2 in.	<b>1.30</b>	<b>1.41</b>	<b>1.72</b>	<b>1.79</b>	<b>1.83</b>	<b>1.83</b>	<b>1.88</b>	<b>1.88</b>	<b>1.88</b>
> 2 < 5½ in.	<b>1.21</b>	<b>1.36</b>	<b>1.47</b>	<b>1.53</b>	<b>1.58</b>	<b>1.56</b>	<b>1.52</b>	<b>1.49</b>	<b>1.44</b>
> 5½ ≤ 8 in.	<b>1.00</b>	<b>1.02</b>	<b>0.98</b>	<b>1.00</b>	<b>1.05</b>	<b>1.05</b>	<b>1.07</b>	<b>1.11</b>	<b>1.11</b>

7. Multiply each  $BB_{SD}$  by the appropriate seasonal correction factor to convert into BBS.

8. Calculate Daily one-way ESALs for the State and the County roads using Daily ADT and the appropriate conversion factor.

$$ESALS_{County} = ADT_{County} \times 0.0214228$$

$$ESALS_{State} = ADT_{State} \times 0.0529324$$

9. Calculate ESAL capacity from the AASHO equation

$$\text{LOG}(ESALS_{capacity}) = 11.06 - 3.25 \times \text{LOG}(BBS)$$

10. Use daily county ESALs to calculate the design ESALs. A growth rate of 3.5% and a 20-year design period is assumed.

$$\text{DesignESALS}_{County} = ESALS_{County} \times 365 \times 28.28$$

11. Calculate the additional ESALs resulting from the detour

$$ESALS_{Detour} = ESALS_{State} \times \text{Days of Detour}$$

12. Calculate the Excess ESALs.

$$ESALs_{Excess} = ESALs_{Capacity} - 2 \times DesignESALs_{County}$$

13. Calculate the overlay ESALs

Case 1 - Excess ESALs < 0

$$Overlay\ ESALs = Detour\ ESALs$$

Case 2 - Excess ESALs = 0

$$Overlay\ ESALs = Detour\ ESALs$$

Case 3 - Excess ESALs > 0

a. Excess ESALs < Detour ESALs

$$Overlay\ ESALs = Detour\ ESALs - Excess\ ESALs$$

b. Excess ESALs = Detour ESALs

$$Overlay\ ESALs = 0$$

No Payment

c. Excess ESALs > Detour ESALs

$$Overlay\ ESALs = 0$$

No Payment

14. If Overlay ESALs are > 0 then calculate the required BBS with the Detour traffic.

$$\text{LOG}(ESALs_{Capacity} + ESALs_{Overlay}) = 11.06 - 3.25 \times \text{LOG}(BBS_{Detour})$$

15. Calculate the overlay thickness based on an 11% reduction per inch of overlay

$$\frac{\left| \frac{BBS - BBS_{Detour}}{BBS} \right| \times 100}{11} = \text{Overlay Thickness (inches)}$$

16. Calculate the cost of the overlay of the segment that the individual FWD test represents (0.1 mile standard).

$$\text{Overlay Thickness} \times \$47,000 \text{ (per inch of overlay per mile of 2 lane road)} \\ \times \text{Segment Length (miles)}$$

17. Sum the costs of each segment. This is the final Equivalent Overlay Method cost.

# Appendix H

## MINNESOTA DEPARTMENT OF TRANSPORTATION

Engineering Services Division  
Technical Memorandum No. 97-29-TS-01  
December 31, 1997

**TO:** Distribution 57, 610, 618 and 650

**FROM:** David S. Ekern  
Director/Assistant Chief Engineer  
Engineering Services

**SUBJECT:** TOWNSHIP ROAD UNOFFICIAL DETOUR POLICY

### Expiration

This technical memorandum supersedes Technical Memorandum 92-45-TS-03 and will expire on December 31, 2002.

### Introduction

Minnesota Statute 161.25 gives the Commissioner of the Minnesota Department of Transportation the authority to designate any public street or highway as an "official Detour" for the purpose of constructing or maintaining any trunk highway. The procedure for the selecting, establishing and maintaining of official detours is covered by the following:

- Minnesota Statute 161.25
- Mn/DOT Standard Specification 1404.2
- Mn/DOT Construction Manual 5-591.652
- Technical Memorandum 96-06-TS-02

These policies and procedures adequately cover the process of selecting, establishing, maintenance and release of official detours. In a limited number of cases, a percentage of local and through traffic elect to use "Township Roads" that are not the official established detour. In these cases, the Township Roads are hereby referred to as "township road unofficial detours".

### Purpose

This policy sets forth additional guidelines to be followed when detours are selected and established for Mn/DOT construction or reconstruction projects and how to deal with the township road unofficial detour.

1. During the project planning process, on projects **that require traffic to be detoured**, the District should involve all appropriate road authorities in the selection of the official detours. This should be done as early in the planning process as possible.
2. On Mn/DOT projects **that require a detour**, all road authorities, adjacent to the project, will be notified.
3. After the appropriate Township authorities have been notified of the proposed construction project and official detour, a township road survey of township roads, identified by the township authorities, that are expected to be impacted by the construction project or detour will be conducted by the township road authority and documented.
4. Traffic counts will be conducted before or after and during construction at the direction and expense of the township road authority on those township roads that are identified as possible candidates of being impacted. These counts will be conducted by an independent firm approved by Mn/DOT.
5. Increased costs of maintenance on the "township road unofficial detour", not including improvement costs, will be documented by the township road authority and submitted to Mn/DOT for consideration in determining payment.
6. If reimbursement of additional maintenance costs on the township road unofficial detour are requested by the affected township road authority and Mn/DOT concurs, Mn/DOT may at its discretion request an after the fact detour designation of the affected township road and prepare a cooperative agreement to allow for the payment of those claims.
7. If the agreement of the additional maintenance costs cannot be reached, an alternate method similar to the "Gas Tax Value" method used for payment to counties for detours placed on their roads may be used. (The increased traffic volumes identified in 4 above will be used in determining payment.) The resulting ADT used in the calculations shall not exceed 25% of the traffic volumes diverted from the detoured trunk highway.
8. If the above processes are not possible, the township may follow Step 5 and submit a legislative claim for additional maintenance costs incurred. The legislative claim process has been available for reimbursement in the past.
9. For emergency detours, short term detours or township road unofficial detours, all of the preceding steps apply, except no agreement or payment will be made for reimbursement of \$500.00 or less.

**References: Technical Memo No. 96-06-TS-02  
Legislative Claim Forms and Procedures  
Final Report DETOUR MANAGEMENT STUDY**