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# Manure Application Technologies & Impacts on Roads and Bridges



This report was mandated by the Minnesota Legislature in Laws of Minnesota 2008, Chapter 350, Article 1, Section 45:

**Sec. 45. INFRASTRUCTURE ADAPTATIONS.**

The commissioner of transportation shall investigate and recommend opportunities for infrastructure adaptations to accommodate the implementation of manure application technologies that lessen impacts on roads and bridges.

The report was prepared in accordance with Minn. Stat. 3.195, 3.197, 3.302, and 16B.122. The estimated cost to Mn/DOT of preparing this report is \$1,800. The costs were all Mn/DOT staff time. No printing costs were estimated.

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## Introduction

Heavy farm trucks can do serious damage to roads and bridges. In an effort to reduce the amount of damage that is done to Minnesota's transportation infrastructure, the agriculture industry transports animal waste through temporary pipelines (known as "drag lines").

Mn/DOT has allowed trunk highway right of way to be used for the operation of drag lines for several years. A February 28, 2002 memo from Mn/DOT's Operations Advisory Committee to district permit technicians recognizes the indirect benefit to the public of pumping animal waste through pipelines rather than transporting it by trucks.

Mn/DOT developed a standard permit that allows placement of pressurized manure/waste pipelines within the rights-of-way of trunk highways. This permit allowed 60-90 days for operations to occur. As a result of the recommendations from this report, the permit has been revised to allow year-round application (see the appendix for the current permit application and special provisions). The operator notifies Mn/DOT two days in advance of when the work will take place, then has two weeks per site to complete operations.

In February 2004, Mn/DOT staff appeared at an annual meeting for commercial manure applicators and provided attendees with a list of all Mn/DOT permit technicians, information on required deposits and a copy of standardized special provisions for this type of work. Updated information for anyone who would like to apply for a permit is available at <http://www.dot.state.mn.us/utility/>. All for-hire manure applicators are required to be licensed by the Minnesota Department of Agriculture. Mn/DOT requires proof of this license before it issues a permit.

Mn/DOT held four meetings to prepare this report. Representatives from Mn/DOT, the Minnesota Pollution Control Agency, the Minnesota Department of Agriculture, and agriculture industry representatives were invited to participate. A brief synopsis of those meetings follows.

1<sup>st</sup> Meeting—September 17, 2008—Mn/DOT staff and manure applicators

Each applicator seemed to have a slightly different feeling about how Mn/DOT should proceed. One seemed to feel that the intent of the law is to require Mn/DOT to make sure that *new* construction projects include culverts that can accommodate drag lines. He did not want to talk about permits and preferred to focus on putting culverts in new projects to allow the applicators to run their pipes through them to fields. Another believed that applicators should not be required to have permits, should not have to use double walled pipes, and should be able to lay pipes flat in ditch bottoms. The third applicator gets permits from Mn/DOT's Mankato district, files a bond and also uses double walled pipes. He seemed to be happy with the permit system in the Mankato district and liked the person he dealt with.

Some issues raised include:

- Can Mn/DOT add culverts when it rebuilds a road?
- Should applicators use double walled pipes?
- Who should clean-up or pay for clean-up in the event of a spill?
- What about bonds/insurance?
- Should a permit be required for each movement or per season?
- What restrictions should there be in crossing bridges?
- Can Mn/DOT allow boring or jacking pipes under roads?
- Are fee levels appropriate?
- Should the pipe be on the back slope or in the ditch bottom?
- Should counties be in the discussion? Do they have different requirements?

2<sup>nd</sup> Meeting—November 14, 2008—Mn/DOT staff and Minnesota Pollution Control Agency staff

The Mn/DOT Mankato district office took the lead on developing the current permit, but solicited input from other districts. At that time, the applicators seemed to think that Mn/DOT came up with a reasonable solution.

It is possible to accommodate putting culverts in as part of a road construction project. Mn/DOT always contacts adjacent landowners prior to reconstruction projects. An interested party must follow Mn/DOT's long-form permit process for putting a pipe under a road, and must maintain the pipe once it is installed (see <http://www.dot.state.mn.us/utility/> for more information). Mn/DOT does not own the pipe even though it is on the right of way. If the party stops using the pipe, they must fill the culvert in. The ends of the pipes have to be off Mn/DOT property, and liability rests with the party. This is similar to drain tiles off Mn/DOT right of way.

The MPCA only gets involved if an emergency response is required. Manure pumping activities must be sensitive to bodies of water, and be cognizant of pipe couplings. Drag lines should be kept away from the edges of culverts.

Mn/DOT will not allow any private utilities to run parallel with roadways.

3<sup>rd</sup> Meeting—January 12, 2009—Mn/DOT staff and Minnesota Pollution Control Agency staff

This meeting was to review comments received from the MPCA, and Mn/DOT's reaction to those comments. The MPCA Land Application Team reviewed the Mn/DOT drag line permit. The Land Application Team in MPCA's feedlot program consists of MPCA staff from all of their offices as well as two county feedlot officers. Generally, the team prefers that any permit or regulatory program adopted would be implemented consistently throughout the state.

1) There is broad agreement among the team that restricting pumping operations between April 15 to November 15 is too limiting. Presently, MPCA permits do not prohibit the application of manure in winter. People need to follow more restrictive requirements in winter than other times of the year but outright prohibition is not one of them.

*Winter is Mn/DOT's snow and ice season. Mn/DOT will allow year-round application, but winter applications must be considerate of snow and ice operations. Mn/DOT has changed the standard provisions in the permit to allow this. Pipes should be clearly marked so people on snowmobiles don't hit them. MPCA allows application of solid manure in the winter, but only allows application of liquid manure on a emergency basis during the winter.*

2) The MPCA should also be specifically listed in the permit whose rules and regulations must be met by the applicant.

*Mn/DOT concurs and has changed the provisions in the permit to reflect this.*

3) The team had concerns on how your permitting program would be managed. For example, many producers favor fall applications which could result in a large number of applications in a short period of time. Also, producers may need to change scheduled applications on short notice due to climate or emergency situations. The issue, therefore, is whether permits can be drafted in a timely fashion so as not to impede manure applications. Perhaps a permit that covers all applications for a producer over a one year period would be more manageable.

*Mn/DOT will allow the permits to be valid for a full year.*

4) The permit requires immediate repair of roadways and roadway shoulders by the applicant. Will repairs be possible if manure applications need to be conducted in winter and damage occurs or could there be flexibility in when repairs are done?

*If damage occurs during the winter, repairs may need to be temporary in nature. Then permanent repairs can be made in the spring once the ground thaws. It is important for applicators to call Mn/DOT before they begin work, so that they*

*can discuss with Mn/DOT staff the condition of the roadway and ditches—and potential for damage—before work begins.*

5) Provision #7 under pumping operations requires pipelines to be sleeved between right of way lines. Does this provision require all lines to be sleeved within the right of way? This should be clarified. If so, this would be costly to applicators and ultimately producers. Also, when using culverts it would be beneficial if couplings had safety pins and placed away from culvert edges as well as standing or running water.

*Mn/DOT only allows pipes to cross the right of way. Mn/DOT requires them to be sleeved within the right of way.*

6) Provision #10 under pumping operations requires an applicant or its contractor to hold a valid license as commercial animal waste technician. State statute does not require producers that apply their own manure to be licensed.

*Licenses are only required if the operation is for-hire.*

7) Given commercial applicators could be doing a large number of sites in a short period of time sometimes using multiple crews they may object to the proposed insurance provisions of the permit as being too cumbersome and costly. Perhaps liability insurance or a bond for applications conducted over an entire year by a commercial applicator would be more workable.

*Mn/DOT allows for continual bonds. The minimum for manure pipelines is \$2,000. Information on this is already attached to the permit application.*

4<sup>th</sup> Meeting—June 29, 2009—Mn/DOT staff, Minnesota Pollution Control Agency staff, Minnesota Department of Agriculture staff, manure applicators and agriculture interest groups

This meeting was to review and discuss the draft report.

Item #10 in the permit special provisions should be modified to read “The applicant or their contractor shall hold a valid license as a ‘Commercial Animal Waste Technician’ if required by the Minnesota Department of Agriculture...” This item currently reads “...as required...” Since a license is not required to conduct this type of operation on one’s own property, Mn/DOT has agreed to make this modification to the special provisions.

Mn/DOT clarified that the third sentence of the second paragraph of the permit special provisions, which states, “He/she shall approve all highway materials prior to the placement, and the total installation must meet with his/her satisfaction,” is intended only to require notification of Mn/DOT staff before pumping operations begin, and does not require another inspection. (Mn/DOT staff perform a field inspection upon receiving a

permit application to check for preexisting damage and/or any adjacent construction projects.)

Mn/DOT explained that Item #4 in the permit special provisions, which states "Removal of the pipeline shall be accomplished immediately upon completion of pumping operations," means that pipelines must be removed within 24 hours upon completion of pumping operations. Mn/DOT will consider modifying Item #4 to clarify the definition of "immediately."

Mn/DOT reiterated its opposition to allowing any longitudinal installations of drag lines. However, if there are special circumstances, Mn/DOT staff could review requests for temporary longitudinal installations across very short distances on a case-by-case basis.

Although longitudinal installation of public utilities is allowed on trunk highway right of way, longitudinal installation of private utilities is explicitly prohibited by Minnesota Statutes and Minnesota Rules. See Minnesota Statutes 160.18, 160.2715 and 161.45; and Minnesota Rules 8810.3100, 8810.3200, 8810.3300, 8810.3400, 8810.3500, 8810.3600, and 8810.5400.

Mn/DOT described the process that occurred during the construction process on Highway 14 between Janesville and Waseca, whereby an opportunity was given to adjacent landowners to have "private" culverts installed under the new highway (at the landowners' expense). Such "private" culverts should be installed deeper than other (i.e. "public") culverts so that the outlets reach to the landowners' property (instead of only reaching as far as the ditch). Because of this, if a "private" culvert is installed after a roadway is built, it requires more of the roadway to be torn up than would the installation of a typical "public" culvert.

Although there is already a standardized process for installing "private" culverts, Mn/DOT needs to make sure that all districts are familiar with the process. (Go to <http://www.dot.state.mn.us/utility/> for a description of Mn/DOT's permit process, permit forms, bond information and district contacts.) Typically, this process should take no longer than six weeks.

On the permit special provisions, the second sentence of the second-to-last paragraph reads, "Work during the period of November 1 through April 15 shall be considered as winter work and shall be done on a *day to day* basis..." A request was made to change "day to day" to "job by job." The goal is to avoid inclement weather when Mn/DOT may be performing snow and ice operations.

Although Mn/DOT allows one permit for multiple locations within a district, every district requires a separate permit for operations within that district (i.e. there is no statewide permit).

### Further Recommendations

When undertaking road and bridge construction projects, Mn/DOT should be more proactive in letting adjacent landowners know about the opportunity to include installation of permanent drag line facilities. (See the appendix for information about installation of drag lines on and near bridges.)

Mn/DOT should ensure that drag line procedures are consistent statewide.

Counties and townships should be brought into this discussion. Although Mn/DOT can provide a supporting role, it may be more appropriate for another agency to lead the discussion with local governments.

## INSTRUCTIONS FOR COMPLETING APPLICATION FOR INSTALLATION OF UTILITIES OR MISCELLANEOUS WORK ON TRUNK HIGHWAY RIGHT OF WAY SHORT FORM TP-1723

Note: An incomplete application will delay processing.

This form is for minor work such as installation of utility service connections that do not cross or parallel the roadway within the trunk highway right of way. This form is also used for repair and maintenance of existing utility facilities, installing miscellaneous guy wires and anchors, to place temporary obstructions on the right of way, to perform temporary relocations, and to accommodate construction projects.

Utility Long Form TP-2525 is used for the vast majority of utility placements and relocations. Form 2525 is for placing, constructing, and reconstructing utilities within trunk highway right of way, whether longitudinally, oblique, or perpendicular in relationship to the centerline of the highway (utilities crossing the highway, or parallel installations).

### Fill Out Form Completely

Print (in ink), type the application, or fill out online and print the form at:

[www.dot.state.mn.us/utility/forms/index.html](http://www.dot.state.mn.us/utility/forms/index.html)

- Be sure to sign it at the bottom. Submit the original form only.
- *COPIES AND FAXES ARE UNACCEPTABLE AND WILL BE RETURNED TO YOU.*

Complete each item on the application. If any item does not apply, print "N.A." in the blank.

Provide a detailed location of proposed work and give reference to nearest cross streets.

Include plans of proposed work along with:

- detailed drawings showing type and location of work in relation to Mn/DOT right of way, on no larger than 11x17 sheets
- detail any type of traffic interference this work may require and submit traffic control plan. Detouring of the traffic from the Trunk Highway will not be permitted, except by special arrangements with this office. All costs involved in the re-routing of traffic including, but not limited to, furnishing barricades, installation or rearrangement of traffic control signs, pavement marking and special flag person services will be charged to the applicant at rates set by the Department for the equipment, labor, and materials used.
- indicate type, kind and size of utility to be placed.

Indicate the method of installation; equipment to be used for excavation and compaction.

After the application has been completed, signed and dated, mail the application (both sides of form) with the required plans to the District office. Contacts and addresses can be found at:

[www.dot.state.mn.us/utility/files/pdf/contacts/permits-contacts.pdf](http://www.dot.state.mn.us/utility/files/pdf/contacts/permits-contacts.pdf)

### After the Short Form Permit has been approved

The applicant will be notified and the security deposit maybe requested. The permit will have special provisions indicating the construction requirements. Read and observe these instructions during construction operations.

### Security Deposit

A security deposit is required for permits that authorize work in state right of way to ensure that work is completed to Mn/DOT's satisfaction. The actual amount required will depend on the specific situation.

The District Permit Section will determine the amount and type of deposit to be submitted, (if applicable), payable to the Minnesota Commissioner of Transportation. Minnesota rules require that deposits be submitted in the form of a certified check, cashier's check, or surety bond payable to the Minnesota Commissioner of Transportation. Deposits must be irrevocable and cannot expire. *A permit will not be issued until the deposit is received.*

### After construction is completed

After construction has been completed and all turf items re-established, the applicant must notify the permit office for final inspection. If all work is satisfactory, the deposit will be returned to the applicant.

Mn/DOT TP-1723 (SHORT FORM PERMIT) (12-08)  <b>MINNESOTA DEPARTMENT OF TRANSPORTATION APPLICATION FOR INSTALLATION OF UTILITIES OR MISCELLANEOUS WORK ON TRUNK HIGHWAY RIGHT OF WAY</b>		Document Management System # _____ District _____ Permit # _____ C.S. _____ T.H. _____ R.P. _____ <i>(DO NOT COMPLETE THIS SECTION. FOR OFFICE USE ONLY.)</i>
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**ATTACH A SKETCH OF THE PROPOSED WORK AND RELATION TO TRUNK HIGHWAY. SUCH SKETCH SHALL BE DRAWN TO SCALE WHEN REQUIRED BY THE ENGINEER. PRINT OR TYPE APPLICATION. SIGN IN SPACE PROVIDED. SUBMIT TO LOCAL OFFICE OF MINNESOTA DEPARTMENT OF TRANSPORTATION.**

APPLICANT	TELEPHONE	ADDRESS (Street, City, State, Zip)
PARTY PERFORMING WORK	TELEPHONE	ADDRESS (Street, City, State, Zip)
LOCATION OF PROPOSED WORK (City/Township) _____ (County) _____ (Distance) _____ (N-S-E-W) _____ SPECIFIC ROAD INTERSECTION OR LANDMARK _____ Highway _____ in _____ Miles _____ of _____ NATURE OF WORK _____ SURFACE TO BE DISTURBED (Check Appropriate Boxes) <input type="checkbox"/> Roadway <input type="checkbox"/> Shoulder <input type="checkbox"/> Concrete <input type="checkbox"/> Bituminous <input type="checkbox"/> Gravel <input type="checkbox"/> Turf Only <input type="checkbox"/> Other _____		
DEPTH OF EXCAVATION BELOW SURFACE	NUMBER & SIZE OF EXCAVATIONS	METHOD OF INSTALLATION/CONSTRUCTION
WORK TO START ON OR AFTER (Date) _____	WORK TO BE COMPLETED BY (Date) _____	IS TRAFFIC DETOUR NECESSARY? <input type="checkbox"/> Yes <input type="checkbox"/> No (IF YES, TRAFFIC CONTROL PLAN IS REQUIRED.)

I, We, the undersigned, herewith accept the terms and conditions of the permit requirements of the Commissioner of Transportation and agree to fully comply therewith to the satisfaction of the Minnesota Department of Transportation. It is agreed that no work in connection with this application will be started until the application is approved and the permit issued. It is further understood that this permit is issued subject to the approval of local city, village or borough authorities having joint supervision over said street or highway and subject to applicant's compliance with the rules and regulations of the Minnesota Environmental Quality Board and any other affected governmental agencies.

Furthermore, except for negligent acts of the State, its agents and employees, the applicant or his/her agents or contractor shall assume all liability for, and save the State, its agents and employees, harmless from, any and all claims for damages, actions or causes of action arising out of the work to be done herein and the continuing usage, constructing, reconstructing, maintaining and using of said utility/miscellaneous work under this application and permit for construction.

Name and Title \_\_\_\_\_ (Print or Type) Email address \_\_\_\_\_

Date \_\_\_\_\_ Signature \_\_\_\_\_

DO NOT WRITE BELOW THIS LINE

PERMIT NOT VALID UNLESS BEARING SIGNATURE AND NUMBER	<b>AUTHORIZATION OF PERMIT</b>	SEE REVERSE SIDE FOR PERTINENT REGULATIONS AND LIMITATIONS
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It is expressly understood that this permit is conditioned upon replacement or restoration of the trunk highway to its original condition or to a satisfactory condition. In consideration of the applicant's agreement to comply in all respects with the regulations of the Commissioner of Transportation covering such operations, permission is hereby granted for the work to be performed as described in the above application, said work to be performed in accordance with special provisions as hereby stated:

**SEE ATTACHED SPECIAL PROVISIONS**

Date All Work To Be Completed By _____	Authorized Mn/DOT Signature _____	Date of Authorized Signature _____
<b>DISTRIBUTION</b> Original to Area Maintenance Engineer Applicant Subarea Supervisor Roadway Regulations Supervisor	<b>DEPOSIT REQUIREMENTS</b> <input type="checkbox"/> No Deposit Required <input type="checkbox"/> Deposit Required in the Amount of \$ _____ Date Deposit Received _____ Deposit to be returned upon satisfactory completion of all work.	<b>DEPOSIT TYPE</b> Cashier's Check # _____ Certified Check # _____ Money Order # _____ Bond # _____
<b>DATE WORK COMPLETED</b> _____ <i>The date when the work is completed must be reported to the local Mn/DOT Roadway Regulations Supervisor.</i>		

## EXPLANATION

This application form shall be used for installations of utility service connections that do not cross the trunk highway roadbeds, for miscellaneous guys and anchors, and for performing miscellaneous work on the highway right of way.

Utility applications for overhead and underground installations and extensions thereto shall be made on Form 2525 and submitted to the Utilities and Agreements Engineer, State Transportation Building for issuance.

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### PERTINENT REGULATIONS

#### Safety

1. Where work on or near the traveled roadway is necessary, proper signs, channelizing devices, warning lights, and barricades shall be erected to protect traffic, employees, and pedestrians. All traffic control devices and methods shall conform to the Minnesota Field Manual on Temporary Traffic Control Zone Layouts, Minnesota Manual on Uniform Traffic Control Devices (MMUTCD), Minnesota Standard Sign Manual, and the appropriate provisions of Standard Specification 1710.
2. If work to be done lies within a municipality or platted town, permission must be obtained from such village, town, or city.
3. Excavations must be cribbed when necessary, depending upon type of soil, in order to prevent cave-ins. All excavations, trenching and/or jacking and boring pits shall be shored or sloped in accordance with OSHA requirements.
4. No guys or stays or any structure are to be attached to trees on trunk highway right of way.
5. Underground construction must be so constructed as not to harm or unnecessarily destroy the root growth of specimen trees.

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### PERTINENT REGULATIONS

#### Roadway

1. Installation of pipe under concrete or bituminous pavements shall be done by jacking or boring or other approved methods.
2. When open trenching or excavating in existing roadways, all subgrade, base, and surfacing materials shall be replaced with the same type, depth, and density of materials which were removed.
3. All backfill must be placed in 6" or less layers and thoroughly tamped and material must be flush and even with the adjacent surface when finally in place.
4. If pavement or roadway is damaged, same shall be restored to a condition as good as or better than the original condition.
5. All pavements shall be replaced in accordance with State specifications.
6. If settlement occurs or excavation caves in so that replaced materials settle (bituminous mat or concrete base), same shall be restored to a condition as good as or better than the original condition.
7. Unless adequately protected by a traffic barrier, there shall be no work within the clear zone, nor shall pipe materials, equipment or other objects as determined by the State, be stored within the clear zone as determined by the Department and as defined by the latest edition of AASHTO's "Guide for Selecting Locations, and Designing Traffic Barriers".
8. No poles, anchors, anchor braces, or other construction shall be placed on the roadway shoulder or within the prescribed clear zone.
9. No driving onto highway from ditch or driving on shoulders will be permitted where damage will occur.
10. No foreign material such as dirt, gravel, or bituminous material shall be deposited or left on the road during any construction activities.

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### LIMITATIONS

1. No lugs shall be used on equipment traversing the road which will damage the road surface.
2. Roadside shall be cleaned up upon completion of all work.
3. If Department of Transportation shall make any improvements or change on all or any part of its right of way upon, over, under, or along the highway, then and in every case the applicant herein named shall after notice from the Commissioner of Transportation or his authorized agents proceed to alter, change, vacate, or remove from trunk highway right of way said works necessary to conform with said changes without cost whatsoever to the State of Minnesota.
4. Drainage on the trunk highway right of way shall be done under Form 30795-02 available at the District/Area Maintenance office.
5. After work on a project is completed said persons doing such work must notify the Area Maintenance Engineer or his authorized representative in which district the work is being performed that such work has been completed and ready for final inspection and acceptance by the State of Minnesota.
6. Cutting and trimming of trees within the right of way and removal of resulting stumps require prior approval of the Area Maintenance Engineer or his authorized representative.

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**NOTE:** Certified Check or Bond may be required to insure proper restoration of highway surfaces and to cover payment for any damage to highways or State property. Additionally, any expense incurred by the Minnesota Department of Transportation above the posted deposit will be assessed against the applicant. In the event that the construction has not been started by the "WORK TO BE COMPLETED BY" date, this permit becomes null and void and deposit refunded.

**ANIMAL WASTE PIPELINE (DRAG LINE) SPECIAL PROVISIONS**

Permit Number \_\_\_\_\_

Note: applicable regulations and requirements on the back of permit TP-1723 (Miscellaneous Work on Trunk Highway Right of Way) must be met and maintained. Additional requirements may be added to the following special provisions if there are unique conditions at the proposed site(s).

The installation authorized within this permit shall be inspected by the Minnesota Department of Transportation (Mn/DOT) District Permit Technician. The applicant, or its contractor, shall notify him/her at least two days prior to starting the installation. He/she shall approve all highway materials prior to placement, and the total installation must meet with his/her satisfaction. At the time of this notification the applicant shall also provide the District Permit Technician with the name and telephone number of a responsible person who will be on site during pumping operations.

This permit authorizes the applicant to place a pressurized manure/waste pipeline from right of way line to right of way line through a centerline culvert crossing the Trunk Highway. The applicant is limited to only performing these operations in the area(s) indicated within this permit. The limits or scope of these operations shall not be revised without prior approval from Mn/DOT.

No work shall be performed which will interfere with traffic along the Trunk Highway. Unloading equipment on the roadway or roadway shoulders is not permitted unless performed with the appropriate traffic control. Parking of vehicles or equipment on the roadway or roadway shoulders is prohibited. Driving onto the mainline roadway from the ditch, or driving on the shoulders where damage will occur, is also prohibited. If the roadway or roadway shoulders are damaged as a result of these operations, they shall be repaired immediately, or within a reasonable timeframe as determined by Mn/DOT. All repair(s), by the applicant, shall be with suitable and approved materials; and such replacement shall conform to existing grades.

No detour will be allowed. When required, all traffic control shall be in accordance with "Minnesota Field Manual on Temporary Traffic Control Layouts (January 2007)" (<http://www.dot.state.mn.us/trafficeng>).

The applicant shall provide a deposit in the amount of \$2000.00. The deposit shall be a certified check, a cashier's check, or surety bond made payable to the "Commissioner of Transportation" and shall remain on deposit until the Area Maintenance Engineer has determined all work performed under this permit complies with the Mn/DOT requirements and is satisfactory in all aspects. This deposit is required prior to issuance of the permit and will be returned to the applicant upon completion of all work, **including turf establishment**. If it is determined the work performed, by the applicant, does not meet the specified requirements, he/she may be ordered by the Area Maintenance Engineer to make necessary corrections. These corrections shall be made within a time limit set by the Area Maintenance Engineer, and if not, the State reserves the right to perform the work and charge the cost of such work against the applicant and his/her deposit. Consideration for the release of this permit will be contingent upon satisfactory restoration of the area. The applicant may provide a deposit to cover all work in a Mn/DOT District for a period of one year. The same requirements as listed above would be enforced. The amount of the deposit would be determined by the amount of work on State R/W.

It is expressly understood that this permit is issued subject to the applicant's compliance with the current rules and regulations of the Minnesota Environmental Quality Board, MPCA, and any other affected governmental agencies.

The applicant or their contractor must obtain all required permits prior to commencing any pumping operations.

The applicant is required to preserve all existing survey monuments. If Mn/DOT determines that monuments have been disturbed or destroyed during construction activities, the applicant shall accept full responsibility for all costs incurred in the re-establishment of the monuments.

All individuals working within the highway right of way shall wear high visibility clothing while performing all operations under the provisions of this permit. The vest, shirt, or jacket and pants (when required) shall be orange, yellow, strong yellow-green or a fluorescent version of these colors. At night and in low visibility situations, the vest, shirt or jacket and pants shall be retro-reflective. A hat in the above colors is also recommended. The retro-reflective clothing shall be visible at a minimum distance of 1000 feet and shall identify the wearer as a person through the full range of body motions.

No material shall be deposited on the traveled roadway or shoulder.

No materials, equipment or pipe may be stored on Mn/DOT right of way with the exception of the carrier pipe and casing pipe while in use to make the crossing.

The applicant shall not alter the existing ditch profile by the removal, addition, or relocation of any materials or soil to facilitate the installation of the carrier pipe or the casing pipe.

The applicant shall not alter or make any type of attachment to any existing signs or structures. All structures damaged as a result of these pumping operations shall be restored to a condition as good as or better than prior to commencement of pumping operations.

All tile inlets shall be protected during pumping operations.

Pumping operations shall be subject to the following provisions:

1. Pressurized pipelines shall not exceed 8 inches in diameter.
2. Pipelines shall be inserted through existing highway centerline culverts.
3. Installation will be temporary in nature - two weeks or less between placement and removal and a maximum of two cycles per location per year.
4. Removal of the pipeline shall be accomplished immediately upon completion of pumping operations.
5. Applicant shall immediately remove the pipeline if it causes any hydraulic capacity problems. Mn/DOT also reserves the right to require the immediate suspension of pumping operations and removal of the pipeline if conditions warrant.
6. Crossings shall be as close as practical to perpendicular to the highway corridor. **Longitudinal installations are expressly prohibited.**
7. Pipelines shall be sleeved from right of way line to right of way line with a larger diameter conduit with a working pressure rating equal to or greater than the working pressure of the pumping system.
8. Retro reflective drums or equivalent shall be placed in the ditch bottoms to warn ATV and other off road traffic of the presence of the pipe crossing.
9. The permit applicant and/or their contractor shall expressly accept all responsibility for any negative consequences for failure of their equipment or processes.

10. The applicant or their contractor shall hold a valid license as a "Commercial Animal Waste Technician" as required by the Minnesota Department of Agriculture, including proof of financial responsibility. The applicant must provide a copy of this license and/or proof of financial responsibility prior to issuance of this permit.
11. No satellite pumps shall be placed on highway right of way.

Applicant shall be responsible for maintenance in this area of installation and all areas that are disturbed or affected by this operation.

It shall be the applicant's responsibility to utilize Gopher State One-Call (1-800-252-1166) to check for utilities on State property.

All areas disturbed by the applicant or their contractor, shall be restored with a minimum of 6" of topsoil (According to Mn/DOT Standard Specification 2105, Table 1, and Topsoil Borrow), then sodded or seeded. If the areas are to be seeded, a Mn/DOT seed mixture compatible with the existing type, Type 1 Mulch, and Disk Anchoring shall be used according to Mn/DOT Standard Specification 2575. Seed or sod shall be the same as or compatible with the existing turf cover. The applicant shall be responsible for weed control in the disturbed areas until turf has been re-established.

Pumping operations shall be allowed year round. Work during the period of November 1 through April 15 shall be considered as winter work and shall be done on a day to day basis at the discretion of the Area Maintenance Engineer. The applicant shall not perform any work or have any equipment on the roadway system (mainline, shoulder area, ditch bottoms) if there are any Mn/DOT units out plowing snow or de-icing the roadway system in the area where work, under this permit, is to be done. The applicant shall not perform any work if there is the potential for rutting of the roadway ditch unless he/she can immediately restore the damaged area to original condition. All work, including turf establishment, shall be completed within a reasonable timeframe. Consideration for the release of this permit will be contingent upon satisfactory restoration of the area.

The applicant hereby agrees to save and hold the Commissioner of Transportation and any employee or agent of the Minnesota Department of Transportation personally harmless from any and all claims, demands, actions, or causes of action that may arise out of the installation and/or removal this pressurized pipeline placed within the highway right of way. Applicant agrees to pay all costs and expenses that the Minnesota Department of Transportation, its officers or employees may suffer or incur by reason of any claim by any person whomsoever arising out of any work associated with this pressurized pipeline to include any accidents and resulting contamination and to pay in full any judgment arising out of any claim that ever may be made against the Minnesota Department of Transportation, its officers or employees arising out of said pressurized pipeline installation and subsequent removal.

I agree to the all provisions and requirements as stated in these Special Provisions.

Dated \_\_\_\_\_, 20 \_\_\_\_\_

By \_\_\_\_\_  
Name - Print or Type

\_\_\_\_\_  
Signature



## Memo

Bridge Office  
3485 Hadley Avenue North  
Oakdale, MN 55128-3307

Phone No: 651-366-4451  
Fax No: 651-366-4497

December 16, 2008

To: Erik Rudeen  
MS 140

From: Victor E. Crabbe  
Bridge Utility Coordinator  
MS 610

Subject: Bridge Office Comments  
Drag Lines Report and Drag Lines Permit Review

The Bridge Office has reviewed the proposed report/permit information and we have the following comments:

1. In general, all drag lines installations within 50ft. of a bridge will be treated as any other fluid. As such, they will be governed by the applicable paragraphs of the Minnesota Department of Transportation Utilities Manual (2007), Appendix B, Section VII Structure Requirements.
2. Attachments to bridges will be required to incorporate expansion and contraction devices in the pipe line system to accommodate expansion and contraction of both the pipe line and the bridge. Additionally, the conduit/pipe carrying the fluid will be required to be insulated against the elements.

Thanks for the opportunity to review this material.