AGREEMENT FOR TRAIL MAINTENANCE
AND GROOMING SERVICES

This agreement ("Agreement"), effective as of the date of attestation by the city clerk, by and between the City of Duluth, a Minnesota municipal corporation ("City") and OVER THE HILL NIGHT RIDERS SNOWMOBILE CLUB, a Minnesota Non-Profit Corporation hereinafter referred to as "OVER THE HILL NIGHT RIDERS" or "Service Provider" for the purpose of rendering services to the City.

WHEREAS, the City annually enters into a snowmobile trail maintenance grant agreement with the Minnesota Department of Natural Resources (MnDNR);

WHEREAS, the City applies for MnDNR recreational trail grant funding for snowmobile trails annually; and

WHEREAS, the City desires to utilize Service Provider's services to provide trail grooming and maintenance on the western portion of the cross city snowmobile trail; and

WHEREAS, Service Provider has represented that it is qualified and willing to perform the services set forth in Exhibit A; and

NOW, THEREFORE, in consideration of the mutual covenants and conditions hereinafter contained, the parties hereto agree as follows:

City and Service Provider hereby agree to the following terms and conditions:

I. Services to be Performed. Service Provider will provide trail services, grooming and maintenance as described on Exhibit A, attached hereto and made a part hereof, for the western portion of the cross city snowmobile trail as generally shown on Exhibit B, attached hereto and made a part hereof. Services shall be performed on an as-needed basis as set forth in Exhibit A, but in all events in a manner and in accordance with the time frames which meet the "Benchmark" requirements contained in Paragraph II.A of Exhibit A.

II. Fees. It is agreed between the parties that Service Provider's fee for the term of this Agreement shall not exceed the amount of the annual grant agreement with MnDNR, including expenses, payable from the 205-130-1220-5535-CM205-PKMTCE-SNWMBL (Parks Fund, Community Resources, Parks Capital, Non-Capital Improvements, Capital Maintenance Fund, Park Maintenance, Snowmobile GIA Program), contingent upon the City's receipt of DNR grant-in-aid funding. Bills for services shall be submitted in accordance with the Benchmark requirements of Paragraph II.A of Exhibit A, shall formally certify that the applicable Benchmark has been met and shall be accompanied by trail maintenance and grooming logs setting forth the dates upon which maintenance and grooming was performed, the number of person-hours expended on each such date and a description of the equipment used for such maintenance and grooming and the number of hours such equipment was used on each such date. All bills for services rendered shall be submitted to the Parks and Recreation Trail Coordinator. Upon receipt of Service Provider's Benchmark certification and required supporting documentation, all of which shall be subject to the approval of City Auditor, City shall submit such certifications and a request for reimbursement to the MnDNR and, upon receipt of such reimbursement, shall pay Service Provide for the services so rendered.

III. General Terms and Conditions

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1. Qualifications.
   Service Provide represents that it is qualified and willing to perform the services set forth herein.
2. Amendments.
   Any alterations, variations, modifications or waivers of terms of this Agreement, including contract price, shall be binding upon the City and Service Provider only upon being reduced to writing and signed by a duly authorized representative of each party.
3. Assignment.
   Service Provider represents that it will utilize only its own personnel in the services set forth herein; and further agrees that it will neither assign, transfer or subcontract any rights or obligations under this Agreement without prior written consent of the City.
4. Establishment and Maintenance of Records.
   Records shall be maintained by Service Provider with respect to all matters that are covered by this Agreement, including but not limited to all Benchmark Certifications and supporting documentation as described in Article II above and Paragraph II.A of Exhibit A. In addition, Service Provider shall maintain current easement records establishing that Service Provider or City or both had access to trail described on Exhibit B for the purpose of maintaining the snowmobile trails thereon. Such records shall be maintained for a period of six years after receipt of final payment for services covered under this Agreement and are subject to examination and audit by the City or State Auditor during that period.
5. Standard of Performance.
   Service Provider agrees that all services to be provided to the City pursuant to this Agreement shall be in accordance with the generally accepted standards for the provisions of services of this type.
6. Contract Period.
   This contract shall be deemed to be effective for services provided from July 1, 2022 to June 30, 2025.
7. Independent Contractor.
   It is agreed that nothing herein contained is intended or should be construed in any manner as creating or establishing the relationship of co-partners between the parties hereto or as constituting Service Provider as an agent representative or employee of the City for any purpose or in any manner whatsoever. Service Provider and its employees shall not be considered employees of the City, and any and all claims that may or might arise under the Worker's Compensation Act of the State of Minnesota on behalf of Service Provider's employees while so engaged, and any and all claims whatsoever on behalf of Service Provider's employees arising out of employment shall in no way be the responsibility of the City. Except for compensation provided in Section II of this Agreement, Service Provider's employees shall not be entitled to any compensation or rights or benefits of any kind whatsoever from City, including without limitation, tenure rights, medical and hospital care, sick and vacation leave, Worker's Compensation, Unemployment Insurance, disability or severance pay and PERA. Further, City shall in no way be responsible to defend, indemnify or save harmless Service Provider from liability or judgments arising out of the intentional or negligent acts or omissions of Service Provider or its employees while performing the work specified by this Agreement.
8. Indemnity.
   Service Provider agrees that it shall defend, indemnify and save harmless the City and its officers, agents, servants and employees from any and all claims, demands, suits, judgments, costs and expenses asserted by an y person or persons including agents or employees of the City or Service Provider by reason of death or injury to person or persons or the loss or damage to property arising out of, or by reason of, any negligent act, omission, operation or work of Service Provider or its employees while engaged in the execution or performance of services

under this Agreement. On ten days' written notice from the City, Service Provider will appear an defend all lawsuits against the City growing out of such injuries or damages.

9. Insurance.
   A. Service Provider shall procure and maintain continuously in force Commercial General, including premises and operations coverage, Insurance written on an "occurrence" basis under a Comprehensive General Liability Form in limits of not less than One Million, Five Hundred Thousand and No/100 Dollars ($1,500,000.00) aggregate per occurrence for personal bodily injury and death, and limits of One Million, Five Hundred Thousand and No/100 Dollars ($1,500,000.00) for Leased Premises damage liability. If person limits are specified, they shall be for not less than One Million, Five Hundred Thousand and 00/100 Dollars ($1,500,000.00) per person and be for the same coverages. The City shall be named as an additional insured therein. Insurance shall cover:
      a. Public liability, including premises and operations coverage.
      b. Independent contractors – protective contingent liability.
      c. Personal injury.
      d. Owned, non-owned and hired vehicles.
      e. Contractual liability covering the indemnity obligations set forth herein.
   B. Workers' Compensation. Workers' Compensation Coverage in statutory amounts with "all states" endorsement if and to the extent required by law.
   C. Requirements for All Insurance. All insurance required in this paragraph 9 shall be taken out and maintained in responsible insurance companies organized under the laws of the states of the United States and licensed to do business in the State of Minnesota.
   D. Certification. Service provider to provide Certificate of Insurance evidencing such coverage with 30 days' notice of cancellation, non-renewal or material change provisions included. City does not represent or guarantee that these types or limits of coverage are adequate to protect the Service Provider's interests and liabilities. IF a certificate of insurance is provided, the form of the certificate shall contain an unconditional requirement that the insurer notify the City without fail not less than 30 days prior to any cancellation, non-renewal or modification of the policy or coverages evidenced by said certificate and shall further provide that failure to give such notice to City will render any such change or changes in said policy or coverages ineffective as against the City. **The use of an "ACORD" form as a certificate of insurance shall be accompanied by two forms – 1) ISO Additional Insured Endorsement (CG-2010 pre-2004) or equivalent, and 2) Notice of Cancellation Endorsement (IL 7002) or equivalent, as approved by the Duluth City Attorney's Office**.

10. Laws, Rules and Regulations.
    Service Provide agrees to observe and comply with all laws, ordinances, rules and regulations of the United States of America, the State of Minnesota and the City with respect to their respective agencies which are applicable to its activities under this Agreement.

11. Termination and Breach
    A. Termination. This Agreement may be terminated by either party without cause upon 10 days' written notice to the other party.
    B. Breach of Contract and Remedies. In the event that Service Provider fails to perform any of its obligations hereunder or performs them in a manner which fails to fulfill such obligations, including but not limited to the submission of false or misleading Certifications or documentation which leads to the imposition of a penalty by MnDNR upon City as described in Paragraph II.B of Exhibit A, the City will have the right but not the obligation of declaring Service Provider to be in breach of its obligations hereunder and shall be entitled to the following remedies, which remedies shall not be exclusive but shall be cumulative:

a. Terminate this Agreement.
b. Recover from Service Provider any and all sums paid by City to Service Provider hereunder.
c. Recover from Service Provide any penalties imposed on City by MnDNR as provided for in Exhibit A.
d. Recover for any damages suffered by City as a result of such breach or breaches.
e. Be entitled to declarative or injunctive relief to enforce the terms of this Agreement.
f. Be entitled to any other form of relief at law or in equity as determined by a Court of competent jurisdiction.
g. Be entitled to recover its costs and disbursements arising out of such default, including reasonable attorney's fees.

12. Applicable Law
This Agreement, together with all of its paragraphs, terms and provisions is made in the state of Minnesota and shall be construed and interpreted in accordance with the laws of the State of Minnesota.

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the date first set forth below.

CITY OF DULUTH MINNTESOTA

By:_____
Emily Larson, Mayor

Attest:

By:_____
Ian B. Johnson, City Clerk

Countersigned:

_____
Josh Bailey, City Auditor

Approved as to form:

_____
Terri Lehr, Deputy City Attorney

OVER THE HILL NIGHT RIDERS SNOWMOBILE CLUB

By: Dale R Reno
Company Representative

Its: Trail Admin.
Title of Representative

Date: 4/7/23

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II. FINANCIAL MANAGEMENT

A. DISBURSEMENT SCHEDULE FOR MAINTENANCE

Annual disbursement by DNR will be based upon the completion of the four benchmarks listed below. Non-disbursed funds will be canceled annually.

1. Trail Completion Benchmark

45% of Total Grant Amount

Disbursement of these funds is contingent on the sponsor providing a high quality map that shows the final alignment of the trail and a Trail Completion Certification Form that the trail is open and available for use.

- The certification must be received no later than December 15th of that year.
- This includes having the trail brushed, bridges in repair, signs installed, gates were capable of being open (snow permitting), and any other additional work needed.
- Also the Sponsor ensures that interest in lands to operate a snowmobile trail have been acquired through fee ownership, easement, lease, permit, or other conveyances of interest throughout the entire Trail.
- This benchmark may be turned in and processed prior to December 1st if all of the above have been completed and certified.

2. Grooming Certification Benchmark, Opening – January 15th

25% of Total Grant Amount

A portion of the grooming monies will be disbursed in February to the Sponsor by the DNR based upon the Certification of Satisfactory Grooming Form received from the Sponsor that the trails have been properly groomed from opening day through January 15.

- The certification must be received no later than February 15th of that year.
- The Sponsor in coordination with the Club must maintain sufficient records to document the activity.

3. Grooming Certification Benchmark, January 16th – Closing

25% of Total Grant Amount

The second disbursement of the grooming monies will be made to the Sponsor by the DNR based upon the Certification of Satisfactory Grooming Form received from the Sponsor and verification that the trails were groomed to the satisfaction of the Sponsor from January 16th through the end of the season.

- The certification must be received no later than April 15th of that year.
- The Sponsor in coordination with the Club must maintain sufficient records to document the activity.

4. Trail Closure/Application Submission Benchmark

5% of Total Grant Amount

The final payment will be based upon the Trail Closure/Application Submission Certification form received from the Sponsor.

- The certification must be received no later than May 15th.
- Trails should be closed based on activities including closing gates, remove refuse, etc.
- A completed application for the next year must accompany the certification.
- Must provide evidence that Sponsor and Club attended spring training session conducted by DNR.
- A map indicating the "anticipated" alignment of the trail must also be submitted.
- A back-up grooming plan must also be provided.
- This benchmark may be turned in and processed prior to May 15th if all of the above have been completed and certified.

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II. FINANCIAL MANAGEMENT

C. ACCOUNTING AND AUDIT

The Sponsor shall maintain books, records, documents, and other evidence relevant to this grant and in such detail that will accurately document all project costs for which payment have been received. The Sponsor shall use generally accepted accounting principles and these records shall be retained for six years after this grant terminates. The State, its representative or the legislative auditor shall have the right to examine this evidence and the Sponsor shall make them available at the office at all reasonable times during the record retention period. Records shall be sufficient, as defined in the Manual to reflect significant costs incurred and volunteer donation of time, equipment, and/or materials in performance of this grant.

D. PROGRAM REVIEWS

The DNR, Parks and Trails Area Supervisors will conduct reviews on an annual basis of how Sponsors and the related clubs are performing within the context of the program. The intent is to increase the interaction between the Parks and Trails field staff and the Sponsors and related Clubs. These reviews will be random in nature and will be done at the grant level. Not every grant will be reviewed every year. This review will include at a minimum the following areas:

- Routine trail monitoring of grooming and maintenance activities
- Review of ongoing trail issues and environmental concerns
- Capital improvement grant reviews
- Complaint management and follow up

E. FISCAL REVIEWS

The DNR, Parks and Trails Grant Coordinator will conduct reviews on an annual basis of how Sponsors and the related clubs are performing financially within the context of the program. The intent is to evaluate how effectively the funds are being distributed by DNR and utilized by the Sponsors and the related clubs. These reviews will be random in nature and will be done at the grant level. Not every grant will be reviewed every year. It is anticipated that eight reviews will be conducted every year. This review will include at a minimum the following areas:

- Contract administration
- Record keeping
- Expenditures

F. ENVIRONMENTAL REVIEW CONSIDERATIONS

Many new development projects and some trail relocation initiatives will require some level of environmental review. Sponsors and related clubs should work with Parks and Trails Area Supervisors on determining which requirements they will need to address as they move forward with their projects. Attached as Appendix D are the rules adopted by the Environmental Quality Board relating to recreational trail development. These rules outline the requirements and exemptions relating to whether or not an environmental review may or may not be needed. Also attached as Appendix C, is the process and general timeline in which the DNR conducts these environmental reviews.

APPENDIX A

ELEMENTS OF A SUCCESSFUL TRAIL

Trail User Maps and Public Information Guidelines

Accurate maps of the trail system should be prepared for free distribution to users. They should be available at the trailhead, DNR offices, and other locations convenient to the public and at a minimum should include the following data:

1. Trail Name or Names.
2. Trail Location -- Give directions on how to get to the trail system parking lot from the nearest town and major highway. A small state map showing the general location within the state could also be useful.
3. Trail Length -- Show the number of miles/km for each segment or loop.
4. Trail Use -- Identify loops or segments designated for snowmobiling use, as well as trails closed to snowmobiling if the potential for conflict with other users exist, e.g., cross-country skiing.
5. Trail Connections -- Identify other trails the trail connects to such as: State Parks and State Forests, State Trails, or other Grants-In-Aid Trails.
6. Trail Information -- Give name, address and phone number of an individual who may be contacted for information, contact the local chamber of commerce to identify them as the local contact. The phone number of the local conservation officer may also be helpful.
7. Bridges -- Show all bridge crossings.
8. Roads -- Identify maintained state forest roads and portions used as trails; also identify roads not maintained, but suitable for snowmobiling.
9. Mark on map and/or list locations where the following services would be available:

Gas	Repair services
Food	Medical facilities
Lodging	Law enforcement officers
Nearest DNR office	911 or Zenith
	Other helpful information

10. Develop a grid system for safety purposes or locating facilities.
11. Basic Safety Tips -- Speed limit, driving on lakes/thin ice, frostbite, trail signs, etc. Statements concerning speed and alcohol should be included on the map.
12. It is helpful to put a date somewhere (bottom right-hand corner for consistency) on the map so the most current maps are in circulation.
13. Identify all roads on map, and have corresponding signs posted on trails to help trail users know where they are at all times.
14. Clearly identify all state asphalt paved bike trails where metal studs are prohibited.

County base maps are available from the DNR that show snowmobile trail alignments. These base maps are available for most counties from the Parks and Trails Unit. Check with the Area Parks and Trails Supervisor for your county.

Trail Design and Construction Guidelines

Minimum riding surface for one-way trail should be eight (8) feet or a reasonable width based on the conditions. Minimum riding surface for two-way trail should be ten (10) feet or a reasonable width based on the conditions. An additional two (2) feet should be cleared outside the trail surface. Minimum turning radius is 100 feet, unless marked.

Branches and obstacles above the trail should be cleared to a height of ten (10) feet.

Reflective signs should be placed on the right side of the trail on posts at reasonable intervals.

APPENDIX A

Trail Grooming Guidelines

General Information

One of the most important winter trail function is grooming. Providing a good smooth trail will depend on ground surfaces, which are free of stumps, rocks, roots or other debris. Because the snow surface will reflect the ground surface conditions, a well groomed, smooth trail depends upon several things: 1) a relatively smooth and even ground surface, 2) a good snow base, and 3) good grooming. Snow compaction compresses loose, fluffy snow so that a firm base is provided. Snow grooming is the process of loosening or breaking up heavily compacted or icy snow and placing the snow back down in equally compacted, smooth condition.

Trail Grooming Guidelines

Under optimum conditions, grooming should begin when snow depth has reached approximately twelve (12) inches. Begin by compacting the snow with a large roller or drag with a packer pan. If this option is not available, packing can be accomplished with just the groomer, using the tracks to compact the loose, fluffy snow. If the snow is too deep, a snowmobile could be used. A very important point is that the snow base should be built from the bottom, up. Snow compacting should be considered after any substantial snowfall. The following are items that you should consider.

- Groom shortly after a snowfall.
- Grooming, when possible, should be done when traffic is light such as at night or on weekdays.
- Ideal grooming temperatures usually lie between minus five degrees Fahrenheit (-5°F) and fifteen degrees Fahrenheit (15°F).
- The kind of snow is a major factor in determining at what temperature the trail should be groomed. Dry snow usually grooms best during the day when the temperatures are warmer. Wet snow grooms best at night when temperatures are usually cooler.
- Cut all moguls off at or near the bottom of the dips and place the snow into a uniform layer. Moguls should not be cut halfway down or an uneven base density will result, and the moguls will reappear.
- In limited snow conditions, set the drag so that snow can be pulled from the edges toward the center of the trail.

A good general rule for grooming speed is four (4) to ten (10) miles per hour. It should be noted that each groomer/drag combination is different, but grooming too slow or too fast will result in poor trail conditions (wash boarding, uneven snow compaction, etc.).

APPENDIX A

Signing Suggestions

In general, signing on trails should be designed to provide direction, information, and safety for trail users. Major signing areas are at the trailhead, trail junctions, and in areas where safety of the user is involved. Trailhead and trail junction signs will provide maps showing route designation, distance, traffic flow direction, and location of support facilities. Safety signs will caution users of steep slopes, bridges, or highway crossings, and other hazardous trail conditions.

Signs on all trails should be kept at a minimum and be well placed.

Signs placed out on the trail should include reassuring blazers, caution signs, do not enter signs, stop signs, etc.

Placement of most signs should be on the right-hand side of the trail just off the main treadway but within clearing limits. Signs should be attached to posts placed two (2) to three (3) feet off the treadway and three (3) to four (4) feet above expected snow depth. Attach them securely with lag screws or carriage bolts. Wood or metal posts may be used depending on location and availability.

The directional sign used on the trail should be trail junction blazers, directional blazers and reassuring blazers. Signs should be placed in open areas or in other areas where a trail user might become confused. *If uncertain about the effectiveness of signing, invite a non-local trail user to identify where deficiencies may exist.*

Suggested Signing Program:

1. **Trailhead**

   The following signs should be located near the parking lot at the start of the trail.

   A. Major Information Board — Map of trails
   Registration — Distance of various routes
   Interpretive information — Rules and regulations
   Trail conditions — Trail uses permitted and prohibited
   Emergency telephone numbers
   Address of person in charge of trail operation and maintenance (unit manager)
   Where to go and who to see in case of emergency

   B. You Are Here -- Should be located at the trailhead and at intersections with other trails.
      i. if necessary, direction of trail (one-way, two-way)
      ii. trail distances (miles or kilometers)
      iii. location of facilities
      iv. you are here location marker

2. **Information**

A. Use Designation -- Should be located at all intersections where incompatible users may enter the trail.

B. Interpretive -- Located at points of interest along trail. Consult regional naturalist for recommendations concerning interpretive signs.

C. General Information -- Located and designed to provide information to trail users to assist or improve their ability to safely and enjoyably use the trail.

3. **Traffic**

A. STOP	NRM 8.4.1.	Location: every traveled public road or railroad crossing.
B. STOP AHEAD	NRM 8.4.2.	Location: should appear 300 feet before traveled public road or railroad crossing.
C. DO NOT ENTER	NRM 8.4.4A	Location: ski or other trail intersections, one-way trails, prohibited areas.
D. YIELD	NRM 8.4.3	Location: intersections with other trails in open areas. May also be used at private trail crossing found on railroad grades.
E. CAUTION	NRM 8.4.5	Location: should be placed prior to all potentially hazardous areas such as cliff edges, rock falls, steep hills, congested areas, bridges, sharp ditches, sharp curves.
F. REASSURING BLAZER	NRM 8.4.7A	Location: where needed to reassure trail use is on the right trail, more in open areas, less in thick woods. May also be needed at unused road or trail intersections.
G. DIRECTIONAL AND TRAIL JUNCTIONS		
	NRM 8.4.8C	Location: based on trail junction. Directional arrows should be placed prior to sharp curves and turns; distance will depend on anticipated speed of user. On snowmobile trails, these signs should appear at least 50 feet prior to the turn, curve, or junction.
H. SNOWMOBILE SYMBOL		
	NRM 8.4.22A	Location: start of trail and at trail intersections with other use trails.
I. NO SNOWMOBILING	NRM 8.5.14B	Location: where needed to restrict snowmobile use.

J. NO MOTORIZED VEHICLE PERMITTED

NRM 8.4.14 Location where necessary to prohibit use, by Motorized vehicles except snowmobiles.

4. **Temporary and Special Signs and Decals**

A. Trail Closed NRM 8.4.4D Location: at points where users could enter the trail.

B. Handicapped Accessible No number available

Location: trailhead and facilities.

C. Grant-In-Aid NRM 8.5.7 Location: at intersections of DNR and GIA trails, also at GIA trail heads.

D. Mileage Markers (optional) Location: at intervals of miles and/or kilometers. Mileage markers can be very helpful to the trail user and manager. They let trail users know the distance they have traveled or must travel to return to the trailhead. They can help the manager easily identify maintenance problem areas and can also be useful to help locate injured or stranded trail users.

No number available

E. Caution Truck Hauling NRM 8.4.9 Placed to provide warnings where logging or other trucks cross or share trail treadway.

F. Stay on Trail NRM 8.2.20 Placed in areas where trespass from trail or environmental impacts are of concern.

G. Ski Pass Required NRM 8.5.24 Place at all entry points to ski trails supported by state funds.

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APPENDIX B

SNOWMOBILE TRAIL SECTION OF THE "TRAIL PLANNING, DESIGN, AND DEVELOPMENT GUIDELINES"

SNOWMOBILE TRAILS

The following guidelines provide general design and grooming parameters for snowmobile trails. As with other types of trails, the guidelines are not intended to be a substitute for site-specific design that responds to local conditions, development requirements, and safety concerns.

TRAIL TREAD WIDTHS AND CONFIGURATIONS

The physical space required for the one- and two-way trails provides the base-line for determining the optional width for snowmobile trails, as the following graphic illustrates.

TYPICAL TRAIL WIDTHS FOR SNOWMOBILE TRAILS

The following defines the basic trail widths and directional configurations for snowmobile trails. (These correspond with the snowmobile trail configurations defined in Section 4 – Trail Classifications and General Characteristics.)

One-way trails are occasionally used in a snowmobile trail system where a moderate length loop is provided or the corridor is particularly narrow.

Two-way trails are often the most practical and thus common type of snowmobile trail. These are well suited for longer, integrated trail systems with moderate to high use levels.

One-Way Snowmobile Trail **Two-Way Snowmobile Trail**

The trail widths shown in the graphic are general and are often modified to accommodate site-specific conditions. A 12- to 14-foot wide snowmobile trail is considered optimal to allow for ease of passing oncoming traffic. Going any wider is not always desirable since it requires more grooming and takes away from the setting and experience of being close to nature.

Trails wider than the optimal width are typically only provided where traffic is especially heavy, such as near a trailhead or between popular destinations. The need for a wider trail in these situations is field determined by the local trail sponsors. At busy trailheads and trail intersections, the first 200 to 300 feet of trail is sometimes a couple of feet wider to allow snowmobilers to wait along one side for their riding group to assemble and still allow for two-way traffic on the trail. The following photos illustrate common trail widths for snowmobile trails.

These classic two-way snowmobile trails are groomed to between 12 and 14 feet wide. The trail on the left runs through a northern forest where sightlines are more limited, which helps keep riding speeds lower. In the middle photo, the long abandoned rail-grade trail is very flat with long sightlines. Here, too, 12 to 14 feet is adequate to accommodate two-way traffic.

Near trailheads, the trail is sometimes groomed a few feet wider to accommodate riders grouping up alongside the trail.

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APPENDIX B

TRAIL CLEARANCE ZONES

The clearance zone is defined as the physical space above and on either side of the trail that is free from obstructions. A 12-foot minimum vertical clear area above the snow surface is recommended for all snowmobiles trails, with 14 feet being required when larger grooming equipment is used.

The horizontal clearance zone should extend a minimum of 24 inches on either side of the groomed area. The horizontal clearance zone should increase at trail or roadway crossings to at least double the width of the trail and standard clearance zone – 32 to 36 feet for a two-way snowmobile trail. The clearance width should also be enlarged near a hazard, such as a bridge or culvert. The extent to which it is enlarged should be determined in the field based on site-specific conditions, taking into consideration sightlines and anticipated speeds. The following photos illustrate common clearance zones adjacent to snowmobile trails.

This is a common example of a comfortable clearance zone adjacent to a groomed and tracked trail. The clearance zone is especially important where trees and brush are present on downhills. Note that by limiting the clearance zone, trail "creep" can be controlled, as can cross-country travel.

The clearance zone should take into consideration the terrain and sightlines. Even with rolling terrain, a couple of feet of clearance on either side of the trail is usually enough for a safe experience. However, the clearance zone should be widened whenever a rider's view is obstructed at normal riding speeds for the trail.

It is common and recommended that the clearance zone be widened at bridge approaches, hazards, and roadway crossings to give riders ample opportunity to react to trail conditions.

TRAIL GRADES, CURVES, AND SIGHT DISTANCES

Snowmobile trails should provide a variety of terrain consistent with the setting. An important distinguishing aspect of snowmobile trails is that they should cross contours at right angles to prevent the snowmobile from rolling over or sliding sideways and tearing up the trail.

As a general guideline, snowmobile trails should incorporate a variety of hills and undulating terrain to add interest. On hilly sections, grades between 10 and 25 percent are acceptable, although 10 percent or less is preferred for safety reasons and sightlines. (The grade percentage of a slope can be measured with a clinometer or calculated using the following formula: percent of grade = rise/run x 100.)

Steeper grades require adequate approaches and run-outs at least as long as the slope itself to give riders ample space to control their machines prior to entering a curve. It is important to maintain vegetation on trails traversing steeper slopes to prevent off-season erosion, which could cause a rough trail and hence grooming and snowmobile handling problems.

On grades of 8 percent or greater, consider separating the trail into uphill and downhill sections to avoid conflicts.

Longer, flowing curves with adequate sightlines are preferred for snowmobile trails. Sightlines should be long enough for the rider to react to oncoming conditions but not so long as to entice excessive speeds.

CURVES

Curves should be as gentle as possible and well signed. Longer curves enhance rider safety and also make trail maintenance easier since snow is not as easily pushed to the edge as can be the case with a sharper turn. As a general guideline, a 100-foot or longer radius is recommended, with 50 feet being the minimum if adequate run-out space and sightlines are provided. Typically, a minimum of 15 feet of clearance zone on the outside of sharp curves is needed to allow riders to regain control if they enter the turn too fast. Warning signs should be provided up to 300 feet ahead of any sharp turn, especially those that require a change in speed.

APPENDIX B

Sight Distances

Sight distances are important on snowmobile trails, with final determinations dependent on the character of the trail and anticipated speeds. As a base-line, sightlines should generally be at least 100 feet and increase from there depending on site conditions and expected travel speeds. At 50 mph, a sightline of 300 feet or more is necessary, especially if a trail is icy. Where sightlines are compromised, warning signs should be provided at least 100 feet and up to 300 feet prior to a hazard. Hazards include roadway crossings, trail intersections, steep drop-offs, and sharp curves.

The following photos illustrate a variety of trail grades, curve situations, and sightlines encountered on snowmobile trails.

The wide-open sightlines of this trail encourage riders to go faster. The lack of a clearly defined corridor also tempts riders to wander off trail onto adjoining private property, which can lead to trail restrictions. Where the corridor is not obvious, blazes along the trail are recommended to keep riders on the approved trail tread – and remind them of the consequences of not staying on the trail.

Approaching hills at a right angle is important with snowmobile trails to prevent rollovers. On steep slopes on two-way trails, separating the uphill and downhill sections is sometimes used to increase safety and reduce the potential for conflict. With the open sightlines and modest grade of this hill, two-way traffic on a single 12- to 14-foot tread works well.

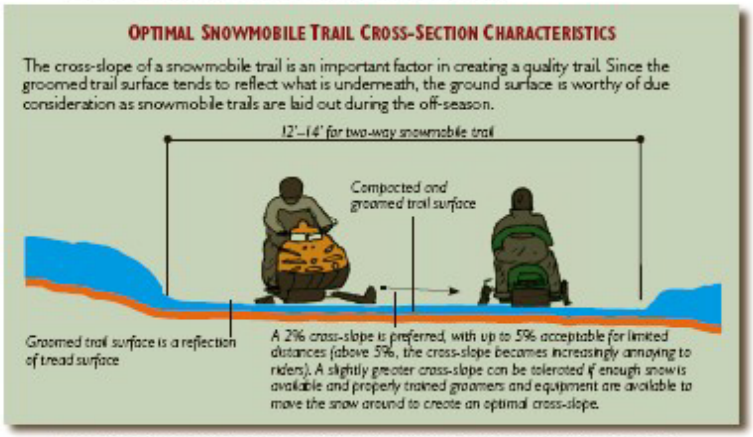
Provide adequate visual cues of an approaching tight curve to enhance trail safety. From this direction, the gate and other signs at the trailhead alert the rider of the approaching curve. From the other direction, a warning sign is provided about 100 feet prior to the curve to alert riders to slow down and approach with caution.

Tread Preparation

The tread refers to the underlying trail beneath the compacted and groomed snow. Proper off-season evaluation of trail alignments and tread surface preparation and maintenance is critical to setting the stage for quality snowmobile trails. The following considers the most important aspects of preparing the tread for winter use.

Trail Cross Grades

The optimal snowmobile trail cross-section is of a consistent, even grade with a 2 percent cross-slope, as illustrated in the following graphic.



As illustrated, an evenly sloped grade across the trail is optimal for snowmobiling. Abrupt grade changes or general unevenness should be avoided to make trails easier to groom and more enjoyable to snowmobile on. The following graphic illustrates these conditions.

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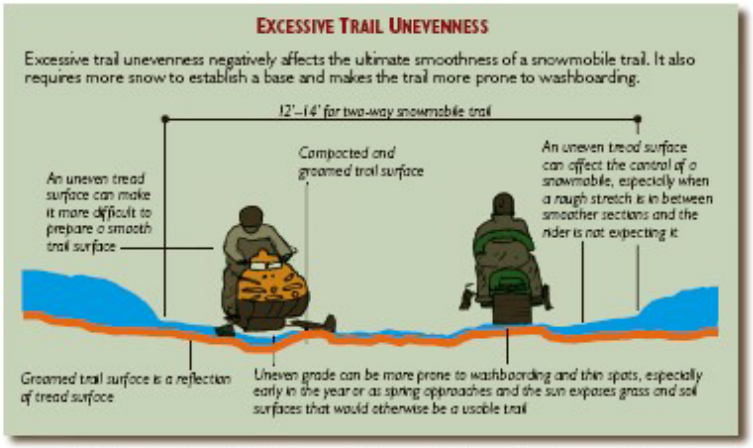

The following photos illustrate some of the previously described cross-section conditions.

This even and smooth grade with vegetation and a slight cross-slope is ideal for a snowmobile trail.

This hard-packed, graveled route through the forest makes for a pleasant snowmobile trail in the winter as long as its use is in sync with forest access rules.

The lack of ground cover on this steeper hill is allowing erosion to take hold, making the trail unsustainable for summer use and increasingly rough for winter use.

TREAD SURFACE CONDITIONS

If not mowed, the longer grasses along this corridor require significantly more snow to create a usable base. Whereas mowing the trail just before the season has considerable merit, that has to be balanced against ecological and wildlife impacts, such as disturbing nesting birds. When trails traverse sensitive natural areas, the principles of ecological sustainability (as defined in Section 3) should be given due consideration. One important factor in this regard is waiting until as late in the season as possible before mowing to avoid disrupting nesting birds and bedded animals.

The tread surface is an important trail preparation and grooming consideration. A uniform grass surface is preferred across the entire width of the trail for a couple of reasons: 1) grass holds snow better than bare ground or paved surfaces and 2) grass helps prevent off-season use and erosion from creating an uneven surface.

The longer and heavier the grass, the more snow it will take to establish a base. Where feasible, mow the trail just before the season to prepare the tread and reduce the depth of base needed to create a usable trail. Under most conditions, a 6- to 12-inch snowfall is optimal to establish a base over a relatively short grassy ground cover.

Routine brushing/trimming of the woody material across the trail and on the edge of the clearance zone is also very important to maintaining the tread surface. All protruding rocks, logs, and other woody debris that would interfere with trail grooming and rider safety should be removed from the trail shortly before the season.

Although not as desirable as a natural or aggregate surface, asphalt is an acceptable surface when snowfall is sufficient. Laws pertaining to the use of studs should be considered when establishing a trail on an asphalt surface. Also, it should be expected that the snow cover will not last as long in the spring as it would on a grass-surfaced trail.

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Tread drainage and erosion are important considerations for snowmobile trails. If drainage is poor and erosion pervasive, the tread surface will be compromised and become uneven, making it harder to groom and ride on. The most important factor in preventing erosion is making sure the trail is covered with a stabilizing ground cover during the off-season. Snowmobile trails that follow the fall line of a slope should also generally not be used for summer uses to avoid creating a single track that exposes the soils to erosion. In some cases, off-season grading and revegetation is necessary to fill in ruts, maintain drainage, and correct erosion problems.

Wetland and Water Crossings

Wetland areas should be avoided when aligning snowmobile trails because the tread surface is often uneven, inconsistent, and unpredictable. Potential ecological impacts are another reason to generally avoid wetland areas. If a trail does cross a wetland, select the location carefully to minimize these impacts.

Lakes and rivers inherently pose safety issues and surface quality uncertainties and should therefore be avoided for formal trails.

Designated use of lakes for snowmobile trails should be avoided given the many safety concerns, such as slush, thin spots, and unknown surface irregularities. There is also a temptation for riders to wander far and wide and also "skip" across open water.

When water drainage crossings are necessary, culverts, boardwalks, or bridges should be used. Approaches to these structures should be smooth and level (up to a 5 percent grade) and with a clear sight distance of at least 100 feet. Bridge and boardwalk decks should be flush with the trail surface with narrow or no gaps between decking boards (to allow snow to accumulate and compact). A 10-foot-wide bridge or boardwalk is optimal, with 8 feet being the minimum acceptable. Each should have a weight capacity of 10 tons or more to accommodate maintenance equipment. All bridges must be designed to meet applicable DNR bridge standards (determined on a site-by-site basis). The following photos illustrate various tread surface and bridge conditions.

A level, grass-surfaced corridor is optimal for snowmobile trails. Mowing the trail just before the season can reduce the amount of snow needed to create a usable base.

Approaches to culverts crossing drainages should be smooth and level. If the trail narrows or the shoulder is steep, place a warning sign at least 100 feet prior to the hazard.

If a summer-use bridge is used for a snowmobile trail, the surface of the trail and deck should be smooth and flush. The deck boards should have minimal gaps to hold snow. Railings are also required.

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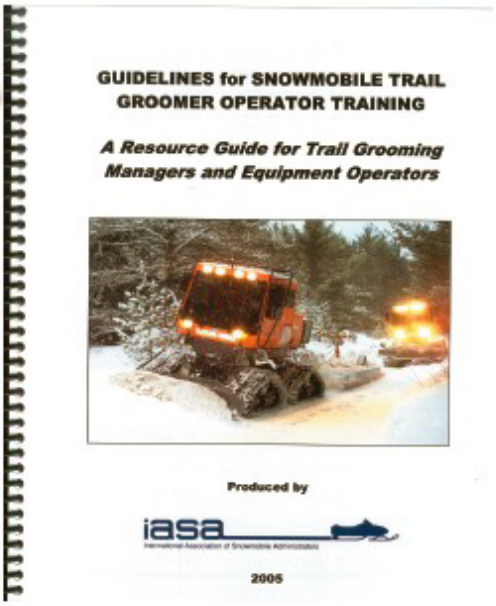
TRAIL GROOMING

Grooming snowmobile trails is a specialized activity that is part art and part technique. The International Association of Snowmobile Administrators (IASA) has done considerable research on this subject and has developed a resource guide for trail grooming entitled *Guidelines for Snowmobile Trail Groomer Operator Training*. The guide covers all of the fundamental aspects of trail grooming and is a highly recommended reference.

For more information!

The grooming guidelines can be found on the IASA website (www.snowmobilers.org/groomer_guide/GroomerGuidecomplete.pdf



ROADWAY CROSSINGS

A gateway at this midblock crossing helps snowmobilers and motorists more easily recognize the crossing. The level grade on both sides of the road (similar to a farm field access drive) also improves sightlines and allows the rider to more easily position for the crossing.

Roadway crossings are an important safety concern for snowmobilers and motorists. All crossings should be well marked with signs, including Stop Ahead signs at least 100 feet prior to a stop sign. Snowbanks should be kept low at all crossings, with ample sightlines from both the trail and the roadway.

Where feasible, roadway crossings should be at intersections where motorists are expecting traffic from the side and thus more likely to recognize a snowmobile trail crossing. If midblock crossings are required, approaches should be as level as possible and sightlines extra long. To be level during the snow season, the approach should be designed to be 3 to 6 inches lower than the road during the none-snow season, where feasible. This will allow groomers to remove the extra snow dragged across the road by snowmobiles and to avoid creating a hump right before the crossing point.

Gateways on each side of the road can also remind riders that they are about to make a crossing and extra attention is warranted. All roadway crossings should be consistent with any applicable laws and ordinances. The optimal location for all crossings should be field determined by experienced trail designers and tested during the day and at night to ensure that they are clearly visible and as safe as possible. The following photos illustrate a number of roadway crossing considerations.

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Although this crossing is well marked from both sides, it is not optimal due to the guy wire from an adjoining utility pole. During the day, riders are likely to see it, but at night it poses more of a risk. Careful attention to detail is essential at all crossings given the distractions that are inherent in these situations.

A narrow tread caused by snowbanks poses two concerns: 1) it reduces the sightlines from the trail and roadway and 2) it squeezes riders into a single path just when they are about to make a crossing. On designated trails, avoid this whenever possible.

Along with proper signage, a light is added at this trail crossing to improve safety. The flatness and straightness of this rail conversion reduced the visual cues associated with identifying this intersection, warranting the addition of the light.

TRAIL SIGNAGE

Consistent with the grant-in-aid program administered by DNR, signage should be provided for direction, information, and enhancing the safety of trail users. Major signing areas include trailheads, trail junctions, and areas where the safety of the user is of particular concern. The primary reference for snowmobile trail signage is the *MN DNR's Sign Manual*, which provides reference numbers and in-depth information for each type of sign used along a snowmobile trail. The instructions manual for the snowmobile grant program administered by the DNR Division of Trails and Waterways also has an extensive listing of signing recommendations. The following provides a brief overview of signage that complements these resources.

Trailhead and trail junction signs provide maps showing route designations, distances, traffic flow direction, and the location of support facilities. Safety signs are used to caution users of steep slopes, bridges, highway crossings, or other trail hazards.

Signs on trails should be kept to the minimum necessary and be well placed to serve their purpose. Signs placed along the trail should include reassuring blazers along with Caution, Do Not Enter, Stop Ahead, Stop, and other related signs.

Placement of most signs is consistent with the guidelines for natural trails as defined in Section 6 – Sustainable Natural Surface Trails. Signs should be placed on the right side of the trail and set back from the main tread, but within the clearing limits. Signs should be attached to posts offset 2 feet (minimum) to 3 feet (preferred) from the edge of the groomed treadway. The signs should be placed 3 feet (minimum) to 4 feet (maximum) above the expected snow depth. Setting the signs 4 feet above the bare ground typically ensures the sign will be the desired height. Posts may be wood or plastic, depending on location and availability.

Directional signs used along the trail should include trail junction blazes, directional blazes, and reassuring blazes. These signs should be placed in open areas or in other areas where a trail user might become confused. If uncertain about the effectiveness of signing, invite a nonlocal snowmobiler to identify deficiencies.

TRAILHEADS AND SUPPORT FACILITIES

Trailheads typically consist of a parking area and trailhead kiosk with trail maps and related information. The parking area for trails varies considerably depending on its popularity and the number of access points. As a general guideline, parking areas should be designed to accommodate a minimum of 10 vehicles, with room for expansion. Each space should be 10 feet wide by 45 feet long. Drive lanes should be 24 feet wide with adequate turning radii. An aggregate surface is sufficient for parking areas if used primarily for snowmobile trail use. Snowbanks from plowing should also be used as the primary means to define the parking area. Posts or other barriers can also be used on the periphery of the parking area to prevent vehicles from leaving the designated area.

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Given the maintenance and cost, providing portable or permanent restroom facilities should be carefully considered. If private services are available near the trailhead, providing these facilities is generally not recommended. In select locations, snowmobile trailheads take advantage of support facilities, including restrooms, at summer-use state or county trails and parks

In addition to trailheads, support facilities that should be identified on trail maps include services such as gas, repair shops, food, lodging, medical facilities, and law enforcement offices (911 or Zenith). The nearest DNR office should also be identified, along with any other helpful information. Trailheads that are in conjunction with or near gas stations and convenience stores can be especially successful.

SUMMER USES OF SNOWMOBILE TRAILS

The compatibility of snowmobile and summer-use trails following the same corridor should not be assumed and requires site-specific evaluation. This is especially the case where snowmobile trails travel through areas of unstable or hydric soils that can support snowmobile use when frozen conditions but become unstable in summer. Summer use of these corridors should be precluded. The following photos illustrate some of these conditions.

This otherwise sustainable snowmobile corridor is not well suited to summer ATV use, as the photo clearly illustrates. An ongoing occurrence of this type of impact only leads to more restrict uses, sometimes even for those the trail was designed to accommodate.

Even seemingly stable soil conditions can be susceptible to erosion when a snowmobile trail corridor becomes a de facto ATV trail. The key point is that all trails must be designed for their purpose. It should never be assumed that a trail corridor for one purpose will be suitable for another until it is assessed for that purpose.

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APPENDIX E

GUIDELINES FOR "TWO-WAY NIGHTTIME OPERATION OF SNOWMOBILES IN ROAD RIGHT-OF-WAYS"

In the 2004 and 2005 Legislative Sessions Minnesota Statutes 84.87 was amended to allow the Minnesota Department of Transportation (Mn/DOT) to permit two-way operation between the hours of one-half hour after sunset to one-half hour before sunrise (nighttime) of snowmobiles on either side of a trunk highway right-of-way, and to allow a road authority to permit two-way nighttime operation of snowmobiles on either side of a street or highway right-of-way. The law states that this will only be allowed if Mn/DOT or the road authority determines that the two-way operation will not endanger users of the street or highway or riders of the snowmobiles using the trail.

Discussions with the legislative committee, the DNR, the Department of Public Safety (DPS), and Mn/DOT determined that the intent of the two-way nighttime snowmobile operations was to be the exception and should be granted only when there is a compelling safety reason and usually for trail distances no more than half a mile. In addition, allowing two-way nighttime operation should not endanger road or snowmobile trail users.

If a grant-in-aid snowmobile club has a section of trail within a road authority's right-of-way and would like to pursue approval for two-way nighttime operation the club will need to complete the following:

1. Determine the section of trail in question and evaluate the safety benefit of allowing two-way nighttime operation.

2. Work with the grant-in-aid local government sponsor, as any permit (e.g., Limited Use Permit from Mn/DOT) would be to the sponsor and the sponsor would be the entity required to request the permit. If the sponsor is also the road authority, the club should work within the local government and communicate with their usual contact who should be able to direct the process within that government entity.

3. Make the official request for the permit to allow two-way nighttime operation on the specific section of trail. The following needs to be completed based on whether the road authority is Mn/DOT or a township, city, county or other local unit of government.

    a. <u>If road authority is Mn/DOT:</u> Contact the Mn/DOT District Office, where the local government sponsor applies for the permit. Below is a summary of the Mn/DOT process. For more information please see the Mn/DOT letter below.
        i. The Mn/DOT District Traffic Engineer and Maintenance Engineer will review the permit application and contact the appropriate DNR Regional Enforcement Supervisor and DPS District Commander for their input and decide to approve or deny the permit.
        ii. If the permit is approved, the District Traffic Engineer should send a copy to the DNR Regional Enforcement Supervisor and the DPS District Commander who will then inform their officers of the permit.
        iii. If the permit is approved, the club should contact their local DNR Parks and Trails Area Supervisor to obtain proper signage for this section of trail (see Mn/DOT letter for sign specifics).
        iv. **<u>The sign is intended to alert trail users</u>** of the two-way snowmobile trail and should be placed consistent with trail signs. Mn/DOT is responsible for traffic signs for highway vehicles.

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b. If road authority is township, city, county, or other local unit of government: Contact the road authority, where the grant-in-aid sponsor applies for permission for two-way nighttime operation on the specific section of trail. Each road authority may have a different process, and the sponsor and club will need to work within each road authority's process for approving two-way nighttime operation. If the local road authority has given permission, the following will need to be completed.
   i. The DNR Regional Enforcement Supervisor and local law enforcement will need a copy of the permit and be made aware of the section of trail that is permitted.
   ii. The club should contact their local DNR Parks and Trails Area Supervisor to obtain proper signage for this section of trail.
   iii. **The sign is intended to alert trail users** of the two-way snowmobile trail and should be placed consistent with trail signs. The Road Authority is responsible for traffic signs for highway vehicles.

In sum, in order to gain a permit for two-way nighttime operation of a snowmobile trail within the right-of-way of a state or local road the club needs to work with their grant-in-aid government sponsor to contact the appropriate road authority. Below you will find relevant statute and subdivision and more information about the official Mn/DOT approval process.

2006 Minnesota Statutes [Excerpt Subd. 1]

http://ros.leg.mn/bin/getpub.php?pubtype=STAT_CHAP_SEC&year=current&section=84.87

84.87 OPERATION; REGULATIONS BY POLITICAL SUBDIVISIONS.

Subdivision 1. **Operation on streets and highways.** (a) No person shall operate a snowmobile upon the roadway, shoulder, or inside bank or slope of any trunk, county state-aid, or county highway in this state and, in the case of a divided trunk or county highway, on the right-of-way between the opposing lanes of traffic, except as provided in sections 84.81 to 84.90. No person shall operate a snowmobile within the right-of-way of any trunk, county state-aid, or county highway between the hours of one-half hour after sunset to one-half hour before sunrise, except on the right-hand side of such right-of-way and in the same direction as the highway traffic on the nearest lane of the roadway adjacent thereto. No snowmobile shall be operated at any time within the right-of-way of any interstate highway or freeway within this state.

(b) Notwithstanding any provision of paragraph (a) to the contrary:

→ (1) under conditions prescribed by the commissioner of transportation, the commissioner of transportation may allow two-way operation of snowmobiles on either side of the trunk highway right-of-way where the commissioner of transportation determines that two-way operation will not endanger users of the trunk highway or riders of the snowmobiles using the trail;

→ (2) under conditions prescribed by a local road authority as defined in section 160.02, subdivision 25 , the road authority may allow two-way operation of snowmobiles on either side of the right-of-way of a street or highway under the road authority's jurisdiction, where the road authority determines that two-way operation will not endanger users of the street or highway or riders of the snowmobiles using the trail;

→ (3) the commissioner of transportation under clause (1) and the local road authority under clause (2) shall notify the commissioner of natural resources and the local law enforcement agencies responsible for the streets or highways of the locations of two-way snowmobile trails authorized under this paragraph; and

→ (4) two-way snowmobile trails authorized under this paragraph shall be posted for two-way operation at the authorized locations.

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(c) A snowmobile may make a direct crossing of a street or highway at any hour of the day

provided:
(1) the crossing is made at an angle of approximately 90 degrees to the direction of the highway and at a place where no obstruction prevents a quick and safe crossing; and
(2) the snowmobile is brought to a complete stop before crossing the shoulder or main traveled way of the highway; and
(3) the driver yields the right-of-way to all oncoming traffic which constitutes an immediate hazard; and
(4) in crossing a divided highway, the crossing is made only at an intersection of such highway with another public street or highway; and
(5) if the crossing is made between the hours of one-half hour after sunset to one-half hour before sunrise or in conditions of reduced visibility, only if both front and rear lights are on; and
(6) a snowmobile may be operated upon a bridge, other than a bridge that is part of the main traveled lanes of an interstate highway, when required for the purpose of avoiding obstructions to travel when no other method of avoidance is possible; provided the snowmobile is operated in the extreme right-hand lane, the entrance to the roadway is made within 100 feet of the bridge and the crossing is made without undue delay.
(d) No snowmobile shall be operated upon a public street or highway unless it is equipped with at least one headlamp, one tail lamp, each of minimum candlepower as prescribed by rules of the commissioner, reflector material of a minimum area of 16 square inches mounted on each side forward of the handle bars, and with brakes each of which shall conform to standards prescribed by rule of the commissioner pursuant to the authority vested in the commissioner by section 84.86, and each of which shall be subject to approval of the commissioner of public safety.
(e) A snowmobile may be operated upon a public street or highway other than as provided by paragraph (c) in an emergency during the period of time when and at locations where snow upon the roadway renders travel by automobile impractical.
(f) All provisions of chapters 169 and 169A shall apply to the operation of snowmobiles upon streets and highways, except for those relating to required equipment, and except those which by their nature have no application. Section 169.09 applies to the operation of snowmobiles anywhere in the state or on the ice of any boundary water of the state.
(g) Any sled, trailer, or other device being towed by a snowmobile must be equipped with reflective materials as required by rule of the commissioner.

Subd. 1a. **Organized contests, use of highways, etc.** Nothing in this section or chapter 169 shall prohibit the use of snowmobiles within the right-of-way of any state trunk or county state-aid highway or upon public lands or waters under the jurisdiction of the commissioner of natural resources, in any organized contest, subject to the consent of the official or board having jurisdiction over the highway or public lands or waters.
In permitting such contest, the official or board having jurisdiction may prescribe such restrictions or conditions as they may deem advisable.

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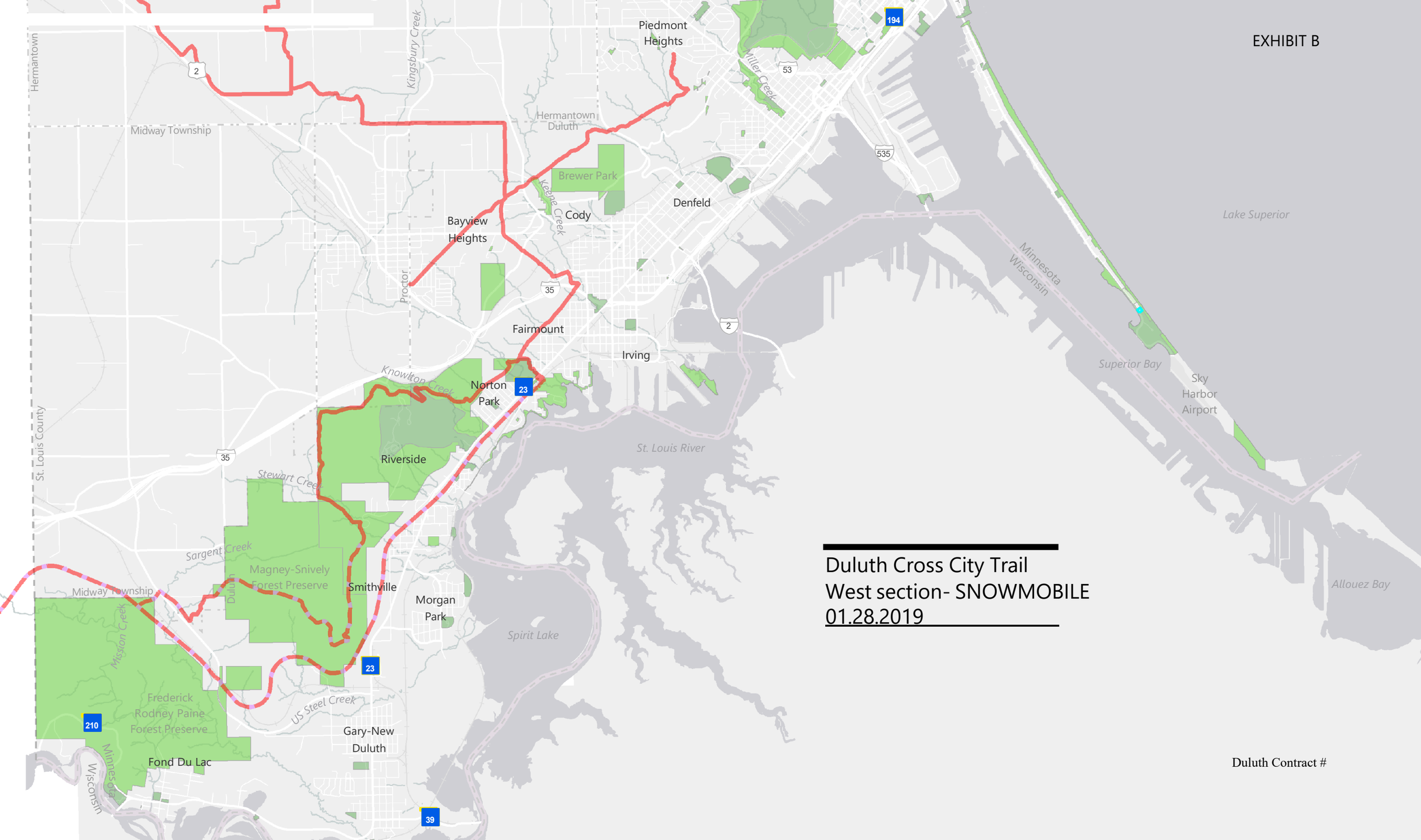

Duluth Cross City Trail
West section- SNOWMOBILE
01.28.2019

Duluth Contract #