

Standard Operating Guidelines

Jackson, New Hampshire

No: 20050307

Date: March 7, 2005

Policy: Snow Removal and Ice Control

Governing Laws: RSA 231:90, RSA 507-B: 2-b

Approval Date: March 7, 2005

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POLICY: It is the goal and intent of the Town of Jackson to provide timely, efficient and cost-effective winter maintenance, snow removal and ice control on the roadways of the municipality for the safety and benefit of the Town's/City's residents and the general motoring public.

PROCEDURE: The objective stated above will be achieved by implementation and execution of the guidelines and tasks outlined in the Town of Jackson Winter Operations Snow Removal and Ice Control Guidelines (see below). Due to the many variables that are inherent in New England weather, each storm and/or weather event may require slightly different effort and/or emphasis on any number of maintenance tasks, which together, determine the overall winter maintenance, snow removal or ice control strategy.

LEVEL OF SERVICE: It is not possible to maintain a black snow and ice-free road or sidewalk during a storm. The Town of Jackson does not maintain a bare road policy at any time. It is the intention of the Town to provide practical, safe access to homes, businesses and municipal facilities during winter storms.

It is our policy to start to conduct snow removal operations upon accumulations of approximately two inches of snowfall. The Road Agent or Public Works Director may, at his or her discretion based upon weather information reports, elect to not remove snow until greater or lesser accumulations.

Pre-treatment and ice control may be addressed prior to the actual storm beginning, during the actual storm as seen effective, and preceding the storm. It should be noted that salt has a much slower effect on melting snow and ice at temperatures below 25 degrees and may not be applied until it is warmer.

Sidewalk snow clearance, at the discretion of the Town of Jackson will be conducted as possible during winter storms. Personnel availability and the need to maintain safe roadways will take priority. Following completion of snow removal on the roads, sidewalks will be cleared.

COMMAND: Direction of all winter maintenance activities for the Town of Jackson is vested with the Road Agent or his or her designee.

EXECUTION: The policy outlined above is intended to serve as the normal operating guidelines for winter maintenance, snow removal and/or ice control for the Town of Jackson. One or more of the following, which may delay or prevent the implementation of this policy, may affect all or any part of this Policy:

- Equipment Breakdown
- Snow Accumulation in Excess of 1" Per Hour
- Freezing Rain or Other Icing Conditions
- Traffic Congestion
- Emergencies
- Personnel illness

WINTER OPERATIONS

SNOW REMOVAL AND ICE CONTROL GUIDELINES

(Includes Highway, Sidewalks, Parking Areas)

EQUIPMENT: The Highway Department utilizes all the assets of the department as needed to address snow emergencies. A list of the current rolling stock assets is included in the appendix.

ROUTES: Currently, the Town is divided into three major plow and/or treatment routes. Two of the routes encompass the Town's major artery and collector roads which each are assigned to one of the Town's equipment. Additionally, there is one truck and grader with 4-way plows used to maintain emergency service facilities, municipal parking areas, and to assist in support of trucks assigned specific routes.

MANPOWER: The Town of Jackson has a crew assigned to its winter maintenance operations. In addition, a part time labor pool may be used if necessary and can be called into service.

MATERIALS: The Department has historically used approximately 100 tons of rock salt and 2,000 cubic yards of sand each season. The sand is used as an abrasive and is applied to the road to improve the public's motor vehicles traction. Salt is employed by the Department as a de-icing and anti-icing agent. The entire supply of sand is purchased each year and stockpiled beside the Highway Department's salt building. The material is stockpiled treated. Rock salt is purchased from a supplier as needed. A limited quantity of approximately 40 tons is stockpiled by the Highway Department. Unless weather conditions require a different approach, winter maintenance routes are treated with a mixture of sand and salt. The mixture is maintained at a minimum of one-part salt to two parts sand. The mixture is applied to the center of the roadway where traffic can work the mix traveling either way. The mixture, in conjunction with traffic action, creates a watery brine melting snow and/or ice, and resisting snow and ice packing on the roadway. The road crown further assists with the spreading of the mixture brine. The sand/salt mixture is only effective to approximately 20 degrees Fahrenheit. Other deicing agents are effective to lower temperatures, but cost and need for specialized equipment have forestalled their use to this time.

COMMUNICATIONS: The majority of the Public Works rolling stock is equipped with two way radios capable of transmitting and receiving on a frequency of 154.965. Each plow and equipment operator is assigned a unique call number. A list of all call numbers is displayed in each piece of equipment or truck. A copy of the current call numbers is included as an appendix to this policy. Radios are also maintained at the Highway Department garage, along with the operator's ability to communicate with the County Dispatch and the Town/City police and fire departments.

SCHOOLS: The Highway Department does have the responsibility for the clearing of snow and winter treatment of the Town schools access road and parking lots. On days when school is in session, winter maintenance efforts must be timed to coincide with bus routing and delivery.

The school superintendent or designated official representative shall contact the Public Works Department to determine the condition of the municipality's roads in order to determine the safety of students using school buses. The school representative(s) shall make the decision to cancel or postpone school for that day.

PARKING: The Town has enacted a winter parking ban effective from November 15th to April 1st of each year. This ban prohibits parking at any time in or on the Town's roads or rights of way (ROW). The Town has the right to tow or ticket violators. The purpose of this winter parking ban is to allow winter maintenance crews unobstructed snow removal and ice control routes, as much as possible, to maintain the maximum effectiveness of their efforts. There is no parking in the Jackson Village between 2:00 am. & 7:00 am. for snow removal. *Refer to Winter Parking Ordinance 2000.*

PLOW ROUTE PRIORITIES: With a total of 30 miles of roads from which to remove snow and control ice and 4 pieces of equipment to handle this responsibility, the Highway Department has to assign priorities for winter maintenance route activity in order to maximize the effectiveness of their efforts for the motoring public.

- A. School bus routes will be given first priority during school days. Each plow route will ensure that the best possible snow clearance will be completed within one hour of the bus route time.
- B. Access to municipal buildings: Public parking areas at the Town Offices, and the parking lot beside the town office will be maintained by plowing after each winter storm is over. The application of slip resistant materials will be applied after the storm as determined to be needed by the Road Agent.
- C. Designated Town parking areas will be maintained when possible with the main snow clearance effort to be done during the snow parking curfew hours from 2 A.M. to 7 A.M. Public Safety is a very great concern in this area due to many cars and pedestrians in the area.
- D. Fire Hydrants: The Highway Department is responsible for the clearing of snow from around fire hydrants when the storm is over.

ROADS AND SIDEWALKS NOT RECEIVING WINTER MAINTENANCE: The Town of Jackson does not maintain certain roadways and sidewalks as part of its ongoing winter maintenance activities. The areas not maintained by the Town include:

- a. Town roads classified as Class VI roads (Summer Maintenance only)
- b. State Highway bridge sidewalk as it passes on U.S. Route 16.
- c. Sidewalk from top to bottom of Jackson Falls

SALT FREE AREAS: The Town of Jackson has established certain roadways or portion of roadways as “salt free” areas to protect drinking water resources or other natural resources which is believed to have been damaged in the past due to roadway salt. A “salt free” area is one in which the municipality has determined it will not use salt as part of its ice control efforts for winter maintenance. The Town will post the area to warn traveling motorists that they are in a “salt free” area.

- a. The Town of Jackson uses a sand & salt mixture on most roads.
- b. Gravel roads will not be treated with salt at any time. (This is to prevent the frozen gravel from melting)

DAMAGE TO PRIVATE PROPERTY: The Town of Jackson is not responsible for damage to private property that is located within the public right of way. (RSA 231:92) The right of way (ROW) is often 50' wide and is often confused by property owners as their own property. In most cases, the ROW often extends 10 to 20 feet of either side of the paved or gravel road. Homeowners often cultivate extensions of their lawns, place mailboxes, erect fences or stone walls in these areas, which improves the appearance of the street greatly, but is obstructive to good maintenance being conducted on the roadway.

In the event of personal property damage, the Town of Jackson will only be responsible to repair or replace damaged property having been in actual contact with the snow removal equipment that is on private property and not within the public right-of-way.

The Town of Jackson's policy is to prohibit home owners from shoveling snow into the roadway, or plowing snow across the public roadway to the opposite side snow bank.

POST STORM OPERATIONS: Excluding the village loop (16A) As determined by the Road Agent, the snowbanks resulting from the previous accumulations shall be pushed back, or shelved, using the plow and wing of the grader or other suitable equipment to make space for future snowstorms. This does not happen after every snowstorm. It is based on snow accumulation.

Snow Removal from the Village loop (16A): Snow removal on the Village loop is, and remains, a state DOT responsibility. During the initial stages of the storm, the State will only plow the traveled portion of roadways through the Village loop. The State is not responsible for plowing or clearing any designated parking areas. This is the responsibility of the Town. The plowing priority is determined by the Road Agent, safety, need and necessity. The priority list is roads, school bus routes, access to municipal services, parking of town areas and sidewalks. Once these areas have been plowed, the Road agent will determine snow removal, (see page 1 "Level of Service").

During the months of November 1st through April 30th winter parking regulations are in effect and shall be enforced by the Town. Vehicles parked in violation of the winter parking ban will be ticketed and towed.

SIDEWALK SNOW REMOVAL: Sidewalk snow clearance is at the discretion of the Town of Jackson and will not begin until:

1. All other snow removal operations are manned and in progress.

2. If there are insufficient personnel available to conduct sidewalk snow removal operations, as well as street and road clearance, the streets and roads shall take priority.

If pedestrians or vehicles cause obstructions to the sidewalk snow removal operations, the Town's winter maintenance operators are encouraged to request their cooperation. Otherwise, the operator is expected to call the Police for assistance. The operator is cautioned to avoid confrontation at all possible costs.

INSPECTION RESPONSIBILITIES:

1. Bridges on Private Roads = Fire Inspector when needed
2. Fire Access = Fire Inspector when needed
3. Driveway Grades, other than entrances = Fire Inspector and Road Agent
4. Driveway Entrances – First 10-20' (curb cut) = Road Agent when needed
5. Site Disturbance = Building Inspector
6. Town & State Bridges inspected by State DOT

Town Engineer can assist Road Agent, Fire Inspector, and Building Inspector when needed.

Jackson Highway Department Standard Operating Guidelines effective 11/2009

Specific Winter Operations

Application for De-Icing Materials

The use of chemicals, abrasives, or chemical-abrasive mixtures is dependent not only on present roadway and weather conditions, but also on anticipated changes in these conditions and fiscal or logistical constraints experienced by the users. The effects of peak traffic periods, approaching nightfall or daybreak, precipitation type, and predicted end of storm, are considered and evaluated prior to selecting the proper materials and rate of application.

Adverse roadway conditions existing during periods of low temperatures, which are predicted to rise, would generally be treated in accordance with the recommendations for the higher temperature. If the time of day, trend and weather forecast is such that a drop in temperature may reasonably be expected, treatment would generally be in accordance with the recommendation for the lower temperature. Chemicals or abrasives should not be used at low temperatures if the pavement is dry and snow is blowing off the pavement as such use would be wasteful and may be counterproductive.

Rates of Application

Generally straight sodium chloride is the chemical of choice for most storm situations. Sodium chloride is used to prevent snow pack and ice buildup on the pavement and to aid removal of any build up that occurs. The following instructional guidelines are recommended to adequately maintain highways under most conditions.

Operations

Snow removal and ice control usually requires the timely application of either chemicals, abrasives Or a chemical-abrasive mixture to roadway surfaces in combination with aggressive snow plowing operations. Choice of material is dependent upon the weather and road conditions. Occasionally conditions such as low temperatures do not require material application. Materials include the following:

Sodium Chloride

The use of sodium chloride (common salt) combined with snow plowing is the most effective, most economical and safest snow and ice control method currently available. Salt is most effective for melting purposes at temperatures above 20 degrees F., with reduced melting ability as the temperature drops. In general, the purpose of salt is to; (1) reduce adherence of snow to the pavement, (2) keep the snow in a "mealy" condition and thereby permit nearly full removal by plowing, and (3) prevent the formation of ice or snow ice (hard pack). Salt is not intended to take the place of snowplows. It is economically and environmentally unacceptable to attempt to melt snow accumulations that are plow able. Salt is also to be added to sand stockpiles to prevent freeze up of the abrasives.

Calcium Chloride

Calcium Chloride is a chemical which melts ice at lower temperatures than sodium chloride. Flake calcium chloride is used as an additive to abrasives (sands) to prevent freezing in stockpiles, to thaw culverts and catch basins, to help hold the abrasive in place on the pavement and on rare occasions to trigger the chemical reaction at low temperatures. The addition of liquid calcium chloride also is beneficial in retaining de-icing material on the roadway by increasing the adhesion of the material in the roadway.

Abrasives

Abrasives (sand and fine mineral aggregates) are used primarily for immediate traction on hills, curves, intersections, railroad crossings and other areas to increase traction and minimize the use of salt. Sodium chloride, calcium chloride or an appropriate mixture of the two are usually added to abrasives in amounts depended upon existing weather conditions. Stockpiles of abrasives are usually treated with chloride at the start of the season to prevent subsequent freezing.

There are many additional circumstances which will necessitate modification to these treatments. Some of the circumstances are:

1. Rising or falling temperatures
2. When pavement is cold and dry and snow is falling, chemicals are not applied. Plowing and treatment of icy spots, if they develop, is recommended.
3. An abrasive-chemical mix may be needed at extremely low temperatures or on very lightly traveled highways. Under these conditions, the effectiveness of salt is reduced and abrasives may be needed for traction.

Width of material spread (throw plus roll) should be restricted. Reduction of the spread width windrowing chlorides will increase the concentration of the chemical where it is needed and therefore increase the effectiveness of the application. Spreading operations should generally be conducted at speeds less than 25 mph on two lane roads. Air turbulence created at speeds greater than 25 mph makes it difficult to retain all the material discharged within the desired width. Spinner and belt speeds and spread pattern must be adjusted to obtain the correct spread rate and to retain the material within the lane(s) where the additional material is required.

Plowing Operations

Plowing operations are generally initiated after one or two inches of snow have fallen and continue until the storm has ended. Widening and intersection view clearing is performed following cessation of the storm as necessary, and generally during daylight hours when best visibility prevails.

For light accumulation snowfalls, snow squalls and so called "Alberta Clippers" of short duration, plowing may begin immediately and may include simultaneous salting and/or sanding to provide the desired results quickly and efficiently.

Truck mounted snowplows and wing plows are utilized to clear pavements and shoulders of frozen precipitation.

Storm intensity (generally measured in inches per hour) varies considerably in New Hampshire but average major snow storms are approximately one inch per hour. The one-in per hour intensity rate and the allowable snow accumulation is used in planning the availability of equipment necessary for snow removal operations.

Frozen precipitation including sleet and the build-up of ice caused by freezing rain are special situations, and not subject to the procedures already outlined. When a changeover from snow or sleet to freezing rain is predicted or anticipated, snow and/or sleet is left on the pavement to capture the freezing rain, thereby preventing a glare ice situation, which without question is the most treacherous condition to occur on the roads and highways. Treatment includes application of salt or sand or a combination, as needed throughout the storm. Heavy rains tend to wash off applied salt or sand, making it difficult to keep the pavement ice-free.

Mailboxes and other structures within the highway right of way:

Occasionally mailboxes or other devices are damaged by snow plowing operations due to poor visibility, the mailbox being buried in a snow bank or the weight/volume of the snow being plowed. This damage is not deliberate and in most cases is unavoidable. The Town of Jackson, is not responsible for damage and does not repair, replace or re-erect boxes that are located within the road right-of-way. These devices are located within the road limits and are the responsibility of the property owner. The Town of Jackson will work with the box owners to locate the box in the safest possible location and offer advice on its design to minimize potential damage.

Widening or pushing back snow banks:

Following storms with heavy snowfall or when several storms result in substantial snow banks, The Town of Jackson will undertake a roadway widening procedure, which will push back the snow banks. This is a necessary operation because it accomplishes the following:

- a. provides room for future snow storage
- b. reduces or prevents melted snow from running out onto the roadway pavement and creating icing conditions
- b. increases safe sight distance at intersections and driveways
- d. maintains a uniform line by eliminating protrusions at driveways and intersections

Unfortunately there is no way to prevent depositing snow in previously cleaned driveways or walkways except to leave a hazardous projecting mound of snow. With hundreds of driveways of all sizes and descriptions along our road system, it is impossible to clear these individual drives as the cost would be prohibitive and would probably result in complaints of highway funds expended for the benefit of certain individuals.

**Jackson Highway Department
Standard Operating Guidelines
*effective 11/2009***

Severe Freezing Rain/Ice Storms/Severe snow storms/Wind Storms

In the event of a major weather event, including, but not limited to freezing rain, ice storms, wind storms, severe snow storms or other weather that makes road maintenance impossible to keep up with, certain roads in town may be closed to traffic. These roads may not be maintained for travel in a timely fashion.

Plow Routes

11/2009

Route #1	Jackson Ridge Road Eagle Mountain Road Adams Road Old Jackson Road Red Barn Road Green Hill Road Dinsmore Road Mill Street Transfer Station Road Town Hall/Police Station School Fire Station Valley Cross Road
Route #2	Carter Notch Road Meloon Road 16B /Moody Farm Road Chesley Farm Road Sugar Hill Lane Wilson Road Cameron Drive Whitney Hill area Black Mtn Road Dunee Road Mountain View Road Thorn Hill Road 16B from School to Black Mountain
Route #3	16B from School to Black Mountain Tin Mine Road All side roads up in Tyrol Switchback Way Jackson Highlands North Hampshire Ridge Thorn Hill

TITLE XX
TRANSPORTATION

CHAPTER 231
CITIES, TOWNS AND VILLAGE DISTRICT HIGHWAYS

Scenic Roads

Section 231:158

231:158 Effect of Designation as Scenic Roads. –

I. As used in this subdivision, "tree" means any woody plant which has a circumference of 15 inches or more at a point 4 feet from the ground.

II. Upon a road being designated as a scenic road as provided in RSA 231:157, any repair, maintenance, reconstruction, or paving work done with respect thereto by the state or municipality, or any action taken by any utility or other person acting to erect, install or maintain poles, conduits, cables, wires, pipes or other structures pursuant to RSA 231:159-189 shall not involve the cutting, damage or removal of trees, or the tearing down or destruction of stone walls, or portions thereof, except with the prior written consent of the planning board, or any other official municipal body designated by the meeting to implement the provisions of this subdivision, after a public hearing duly advertised as to time, date, place and purpose, 2 times in a newspaper of general circulation in the area, the last publication to occur at least 7 days prior to such hearing, provided, however, that a road agent or his designee may, without such hearing, but only with the written permission of the selectmen, remove trees or portions of trees which have been declared a public nuisance pursuant to RSA 231:145 and 231:146, when such trees or portions of such trees pose an imminent threat to safety or property, and provided, further, that a public utility when involved in the emergency restoration of service, may without such hearing or permission of the selectmen, perform such work as is necessary for the prompt restoration of utility service which has been interrupted by facility damage and when requested, shall thereafter inform the selectmen of the nature of the emergency and the work performed, in such manner as the selectmen may require.

III. Designation of a road as scenic shall not affect the eligibility of the town to receive construction, maintenance or reconstruction aid pursuant to the provisions of RSA 235 for such road.

IV. Designation of a road as a scenic road shall not affect the rights of any landowner with respect to work on his own property, except to the extent that trees have been acquired by the municipality as shade or ornamental trees pursuant to RSA 231:139-156, and except that RSA 472:6 limits the removal or alteration of boundary markers including stone walls.

V. A town may, as part of a scenic road designation under RSA 231:157 or as an amendment to such designation adopted in the same manner, impose provisions with respect to such road which are different from or in addition to those set forth in this

section. Such provisions may include, but are not limited to, decisional criteria for the granting of consent by the planning board or other designated municipal body under paragraph II, or protections for trees smaller than those described in paragraph I, designated for the purpose of establishing regenerative growth along the scenic road. VI. Any person who violates this section or any local provision adopted under this section shall be guilty of a violation and shall be liable for all damages resulting therefrom.

Source. RSA 253:18. 1971, 455:1. 1973, 586:2. 1981, 87:1. 1983, 122:2. 1991, 134:3, 4. 1992, 160:2, eff. July 5, 1992

Scenic Roads

Roads can be designated as “scenic roads” through RSA 231:157. This designation creates some restrictions on cutting trees or removing stone walls in connection with highway work. Routes 16, 16A, and 16B do not qualify under the Act, as they are Class I or II roads. The following roads have been voted for scenic designation:

Dundee Road – from Black Mt. Road to Jackson/Bartlett line

- Black Mt. Road – from Dundee Road to terminus
- Thorn Hill Road – from town line to Route 16A
- Thorn Mountain Road (now named Switchback Road) – 16A to terminus
- Iron Mt. Road / Green Hill Road – from Route 16 to terminus
- Tin Mine Road – from 16B to terminus
- Wilson Road – the entire length

To date, no other roads have been proposed for scenic road designation.

Highway Classification

New Hampshire’s classification system can be divided into two broad categories – state highway definitions and municipal highway definitions. Class I, II, and III highways are those highways controlled and maintained by the New Hampshire Department of Transportation. Class IV, V, and VI highways are those highways for which municipalities must bear the responsibilities.

Class I (Trunk Line Highways) consist of all existing or proposed highways on the primary state highway system, excepting all portions of such highways within the compact section of towns and cities of 5,000 or more inhabitants.

Class II (State Aid Highways) consist of all existing or proposed highways on the secondary state highway system, except portions of such highways within the compact sections of towns and cities of 5,000 or more inhabitants which are classified as Class IV highways.

Class III (Recreational Roads) consist of all such roads leading to, and within state reservations designated by the legislature.

Class IV (Town & City Streets or Compact Section Highways) consist of all highways within the compact sections of towns and cities of 5,000 or more inhabitants. Extensions of Class I and Class II highways through these areas are included in this classification.

Class V (Town Roads or Rural Highways) consist of all other traveled highways which the town or city has the duty to maintain regularly.

Class VI (Unmaintained or Discontinued Highways) consist of all other existing public ways including, 1) highways discontinued as open highways by formal vote of the town, 2) highways closed subject to gates and bars, 3) highways not maintained for five years or more. No state aid is available for such roads and a municipality is not required to maintain a Class VI highway. The Town maintains Class VI roads for emergency use only and feels that guidelines should be developed to handle development on these less than adequate roads.

Route 16 is the only state (Class I) road in Jackson. Route 16A (formerly Jackson Village Road, now known as Main Street) and Route 16B (formerly the Five-Mile Circuit Road, now consisting of a portion of Black Mountain Road, a portion of Carter Notch Road, and the road connecting them, now called Moody Farm Road) are maintained in winter by the town and in summer by the state. Forest roads exist off Iron Mtn. Road and beyond the ends of Carter Notch Road, Black Mtn. Road and Town Hall Road. All other roads are either Class V town roads, Class VI roads or private roads.

Detailed maps of the road system in Jackson were prepared by the N.H. Bureau of Emergency Communications in September 2002 for the Enhanced 9-1-1 addressing system. All roads were named, including short access roadways to buildings that might be considered by some to be driveways. Because of the close similarity of some road names, a few roads in town were given new names. Former names are shown crossed out. All of the roads named by the 9-1-1 system are included in the chart below. Lengths were measured on the maps to the nearest .05 miles.

**Jackson Highway Department
Standard Operating Guidelines
effective 11/2009**

Driveway Culverts

Under RSA 236:13 VI, all private driveway connections, including structures like culverts, remain the continuing responsibility of the landowner-even if located within the right of way. It is immaterial whether the driveway connection pre-dates the town's permit system. If any driveway connection threatens the integrity of the highway due to the plugged culverts, erosion, siltation, etc., the Select board or its designee can require the owner to repair it. If the owner refuses to effectuate such repairs, then the town may perform the work and assess the cost to the owner.

ADOPTION:

The Town of Jackson has adopted the Winter Operations Snow Removal and Ice Control Policy effective March, 2005. All residents are encouraged to familiarize themselves with the content as it describes the condition that one might expect to encounter before, during and following a winter storm event.

Revised and Approved: 8/13/2019

BOARD OF SELECTMEN
JACKSON, NEW HAMPSHIRE