



# Road Business

A University of New Hampshire Technology Transfer Center Publication

Vol. 17 No.

Fall 2002



Figure 1. An improperly installed Speed Limit Sign (R2-1)

## On the Road in New Hampshire

### Setting and Posting Speed Limits

Federal and state laws require a technical study to set speed limits. However, in many cities and towns setting speed limits are often political decisions. Also, as shown in Figure 1, some municipalities improperly install speed limit signs. This article describes the rules and accepted process for setting and posting speed limits.

### Speed Limit Determination

RSA 265:60 sets speed limits for certain areas. The road in Figure 1 is a “rural residence district” with a statutory speed limit of 35 mph. RSA 265:63 also gives municipalities the authority to modify the statutory speed zones. It and federal laws (MUTCD, 2B.11), however, limit that authority by requiring engineering and traffic studies. A municipality must hire a consultant

unless it has “sufficient staff” to conduct the investigation. That staff must have the time and expertise to consider the many factors in a speed limit study.

- Road characteristics, such as travel surface, shoulder condition, road alignment and sight distance, road and shoulder width, the number of lanes, and passing zones.
- Land use and numbers of driveways.
- The speeds of vehicles, and the “85th percentile speed” (85% of the traffic flows at or below the prevailing speed).
- Safe speed for curves and intersections.
- Parking practices and pedestrian activity.
- Vehicle volume, types, and characteristics.
- Weather and climate.
- Accident frequency and severity for the past 12 months.

Investigators must collect and analyze data for all the factors. The Vermont Local Roads Program’s *Setting Speed Limits* has worksheets for data collection and analysis. (See the UNH T<sup>2</sup> Center website to view this booklet, or page 9 to order it and applicable RSAs.)

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Road Business is a quarterly publication of the:

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The Technology Transfer Center at the University of New Hampshire (UNH) is supported by the Federal Highway Administration (FHWA), the New Hampshire Department of Transportation (NHDOT), and UNH. Any opinions, findings, conclusions, or recommendations presented in this newsletter are those of the authors and do not necessarily reflect the views of the FHWA, NHDOT, or UNH.

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Investigators should also consider Advisory Speed Plaques (W13-1). They tell drivers that a lower speed might be necessary at curves, turns, intersections, and other local conditions. Although not enforceable, they add emphasis and information to other warning signs. The MUTCD requires that advisory speeds be determined by an engineering study.

A technically determined speed limit is usually the 85th percentile speed. Especially in modern residential developments, that speed might be dangerous to pedestrians and bicyclist. Lowering speed limits, however, are seldom the best solution. More than 15% of the drivers will then exceed speed limits. Many residents and pedestrians will have a false sense of security. Traffic calming techniques are usually a better solution. (See "Taming Traffic" in *Road Business*, Summer 2001)

## Speed Limit Sign Installation

The Speed Limit Sign (R2-1) informs motorists of speeds required by law. The MUTCD requires a Speed Limit Sign be installed

- Where one speed limit changes to another,
- Beyond major intersections and where necessary to remind drivers of the lawful speed,
- At municipal boundaries, and
- Where easily seen by all motorists.

In Figure 1, even without the R2-1 sign, the Horizontal Alignment/Intersection Sign (W1-10) is too low. The bottom of a single sign must be at least 5 feet above the near edge of the pavement. The height must be 7 feet where parking or pedestrian movement occurs. For two signs, mounting height to the bottom of the secondary sign may be one foot less.

The Institute of Traffic Engineers (ITE) recommends that agencies normally erect signs on individual posts. Grouping is appropriate when one sign supplements another. Grouping, if it does not confuse motorists, can reduce roadside obstructions and to save money.

After the Figure 1 picture was taken, the Town decided that the W1-10/R2-1 grouping might be confusing. It replaced the speed limit sign with an Advisory Speed Plaque. It relocated the Speed Limit Sign past the intersection. This meets the general MUTCD standard for location: "Signs requiring different decisions by the road user shall be spaced sufficiently far apart for the required decisions to be made safely."

#### Sources

MUTCD. *Manual of Uniform Traffic Control Devices*. 2002. Federal Highway Administration. Revised Statutes Online. <http://gencourt.state.nh.us/rsa/html/indexes/default.html>.  
*Setting Speed Limits: A Guide for Vermont Towns*. 1995. Vermont Local Roads Program.  
"Setting Speed Limits on Local Roads." 1999. Wisconsin Transportation Center.  
*Traffic Signing Handbook*. 1997. Institute of Traffic Engineers.

# Chain Saw Operation and Maintenance

Chain saws are a valuable, and dangerous, tool used by highway agencies. Crews must operate and maintain chain saws properly. This article describes proper operation, maintenance, refueling, and storage.

## Operation

Crews should operate only chain saws that are undamaged, properly adjusted, and completely and securely assembled. They should wear close fitting and protective clothing, goggles, gloves, and hearing protection.

When starting a chain saw, operators should hold it firmly on the ground or on a stump. They should **never start it on a leg or knee!** Once started, they should be sure the chain stops moving when they release the throttle trigger and when the engine idles.

Firm footing and balanced positions are imperative. Operators should hold the saw firmly with both hands, and with thumbs and fingers encircling the handles. When cutting a limb under tension, they should be alert for anything that might snap back.

Kickback is the main cause of serious injury. It can occur

- When the chain on top of the guide bar becomes pinched in a cut.
- If the chain comes into contact with another branch or log.
- When cutting brush or small saplings, because they often catch the saw and whip it back.
- When the chain is dull or loose, or the engine is running slowly.

Obviously, operators must avoid all these situations. Chain saws should also have anti-kickback devices, including an automatic chain brake, low kickback chain, or a kickback bar.

Operators should shut off the engine when moving to another location. They should carry the saw with the guide bar, and with the saw pointed to the rear and the muffler away from the body.

## Maintenance

To maintain chainsaws properly operators must keep dirt, fuel, and sawdust from building up on the engine or the saw. They have to keep spark plugs and wire connections tight and clean, and handles dry, clean, and free of oil or fuel.

A dull chain is dangerous. It puts a strain on all working parts of the saw and adds work for the operator. A chain is dull when normally easy-to-cut wood becomes hard to cut and burn marks appear on the wood. Operators should frequently sharpen, tension, and lubricate the chain.

Operators maintain proper tension by tightening all nuts, bolts, and screws (except the carburetor adjustment screw) after each use. Replace worn parts, such as the sprockets and chains.

## Refueling

Operators should refuel frequently, to avoid running out of fuel in the middle of a cut. They should refuel away from work areas, so fuel is a safe distance from running engines. Before refueling, they must shut off the engine. They release pressure in the fuel tank by slowly opening the fuel cap. Before restarting, they should wipe the saw to insure spilled fuel is thoroughly dried.

## Storage

Before storing chain saws, operators should clean and maintain it as described above. They should store them a dry location, away from other tools.

These simple guidelines will prevent chain-saw injuries and enable efficient operation.

*Source*

*"Operating a Chain Saw." Illinois Interchange, Summer 2002, p. 4.*

# Engineers and Municipalities

Municipalities have limited staff to solve technical road and bridge problems or to design projects. They must hire engineering consultants to fill these needs. This article describes developing a relationship with engineering firms and the best way to choose one.

## Choosing the Firm

Above all else, engineers must have sufficient technical and legal knowledge. Because the most qualified engineers are seldom the cheapest, selection should not be based on their fee. Therefore, cities and towns should issue a request for qualifications (RFQ), rather than a request for proposal (RFP). An RFQ asks for the firms' experience and expertise. Unlike an RFP, the fee is secondary to qualifications.

When drafting and evaluating the RFQ, municipal officials should consider:

- Personal Chemistry.
- Experience.
- Expertise in Regulations.
- Familiarity with Municipal Work

**Personal Chemistry.** Communication and mutual respect are essential between engineers and city/town officials. Disagreements about the scope of work are the most frequent cause of a strained relationship. The RFQ must clearly describe the scope of work.

**Experience.** For a specific problem, the municipality should hire an expert in that technical area. For periodic consultation, or for a road or bridge project, it should seek a firm capable of dealing with many engineering issues. The RFQ should ask for evidence of applicable expertise and experience.

**Expertise in Regulations.** Federal and state laws impact nearly all road and bridge projects. Municipalities must rely on the engineer to inform them of laws and to bring them into compliance. The selected engineering firm should have an established relationship with appropriate officials. This enables their knowing specifics of existing rules and keeping abreast of changing regulations and permits.

**Familiarity with Municipal Work.** Municipal officials often want their consultant to

be accessible for citizen's meetings. Officials should ensure that selected engineers present plans and alternatives clearly to lay audiences.

## Contract Term

For a single project a city/town selects a firm to complete a specific venture. The firm's scope of work is clear and its task set. The relationship ends at project completion.

In a long-term relationship, the municipality pays the firm to oversee its interests when requested. Such arrangements often save money in the long run, and prevent problems arising from using different firms for each project. They provide continuity and require less time to answer questions. Engineers and city/town officials share a vision of where the community is going and historical knowledge of where it has been.

## Get it in Writing

To ensure a solid municipality-engineer relationship, anything important should be in writing. It is especially important to write and distribute responsibilities and expectations.

For focused and productive meetings,

- Establish a written meeting schedule and an agenda for each meeting,
- Document action items and responsibilities.
- Take notes and send copies to everyone as soon as possible.

Conversations, especially involving decisions, should be documented and shared. Any hint of confused responsibilities should be quickly addressed and clarified in writing.

## From Start to Finish

A municipality benefits when engineers are involved from project conception to completion. Engineering during project development usually reduces construction costs. Moreover, engineers clear about municipality needs provide the best services. If engineers are involved from project conception, unpleasant surprises and unrealistic expectations are less likely.

*continued on page 5*

# Telephone Etiquette

by Beth Terney, Project Assistant

Many residents contact their highway department only by telephone. The first contact for many others is by phone. Their opinion, therefore, will depend on how department employees answer the phone and talk on it.

## Answering the Phone

Although difficult, one should stay calm and respectful when dealing with irritated callers. The best course is to acknowledge the caller's frustration, and try to solve the problem. The employee should never attack in return.

## Taking and Leaving Messages

Employees should answer phones promptly and politely. They should slowly and clearly identify themselves and the office. They should be positive, helpful, and give the caller their full attention. If background noise cannot be stopped, they should take the call in a quiet location.

Inaccurate messages, or calls not returned, reflect badly on a department. A pad of paper and pencil should be near the phone. Employees should know where to leave messages. Messages should contain the caller's name, company, phone number, and other important information. Reading back the information ensures accuracy. Initialing the message tells the recipient who took it.

*continued from page 4*

## Invest the Time

In the end, the municipality and the engineer must commit to each other. For long term arrangements, it can take a year to establish a good relationship, and to define mutual expectations. If these do not occur after a year, the city/town should seek a new firm. Ideally, a long-term relationship leads to better communication, increased trust, and a better knowledge of what each party needs.

When leaving messages, one should speak clearly, slowly, and leave a brief but complete message. It is best to decide what to say before calling, including one's name, company, phone number, and the date, time, and purpose of the call. Leaving the best time to call back makes returning calls less inconvenient. Slowly repeating one's name and number at the end ensures accuracy.

## Answering Machines

Recorded answering machine messages should be brief and clear beginning with the name of the person or organization who owns the machine. Instructions for leaving messages should be clear. If applicable, the message should tell where to call in case of an emergency.

## Conclusions

People can be challenging. Common courtesy can give them a positive impression of a highway department.

Sources:

"The Ps and Qs of Etiquette." *Saskatoon*, 16 July 2001.

<http://www.mysask.com/community/saskatoon/lifestyle/selfimprovement/etiquette.shtml>, July 2001.

Levy, Karen. "Telephone Manners." *Proper Business Telephone Etiquette*. [http://schs.esu7.org/pages/HOME/PAGE/Telephone\\_Manners.html](http://schs.esu7.org/pages/HOME/PAGE/Telephone_Manners.html), July 2001.

A municipality must define its needs clearly, pick the firm that best meets them, and invest time. A well managed partnership results in better roads and bridges, and lower costs, for residents.

Source

Minster, James J. "Engineers and Municipalities." *Public Works Magazine*, July 2001

# Master Road Scholars



**Master Road Scholar Frank Hoye**

Frank Hoye is the Highway Foreman in Keene. Before joining Keene he was a foreman for a concrete business and owned his own construction company. In 1989 he started working as a Sidewalk Construction Foreman in Keene, a position that quickly expanded into Highway Foreman.

Frank says that workshops have helped him gain a diverse number of skills that he can apply to his work. He uses them to keep up-to-date with new developments in transportation. Frank has found many of the skills to be extremely useful when applied to his town.

Selectmen in Keene are proud of Frank's Master Road Scholar status. They illustrated their appreciation by publicly thanking him and offering him a round of applause.

Frank and Cindy have been happily married for 25 years. They have three daughters and a son. Their eldest daughter is graduating from Duke this December. Another attends college in Ohio. They also have a 10 year old son and a 5 year old daughter. Frank once enjoyed a number of hobbies, including flying RC Aircraft and spending time outdoors. He now prefers to spend his free time with his family. Their quality time together keeps Frank very happy and optimistic.

Congratulations to Master Road Scholar Frank Hoye!



**Master Road Scholar Ron Lavoie**

Ron Lavoie is the Supervisor of Athletic Facilities at UNH. He has been at this position for two years, after being the Manager of Grounds and Roads at UNH for 17 years. Before working at UNH, Ron was in the air force at Pease Air Force Base for 11 years as the pavement maintenance specialist. He continued to work at Pease for two years after leaving the service.

Ron takes classes for the unique experiences and opportunities they offer. He feels that, of everything offered at the University, these classes pertain best to his job and department. He likes how much takes away from just one day in a course, and finds that he benefits most from talking and sharing ideas with his peers. He found the snow removal courses especially helpful because he presented the information to his supervisors to help improve and benefit the University.

Ron's supervisors are thrilled that he has achieved Master Road Scholar status. He is the first to do so at the University and is very proud of how hard he has worked to get to the top level. He has enjoyed taking classes that have kept him current in a field that is constantly changing.

Ron has been married to Terri for 22 years. They live in Dover and have two sons. In his free time, Ron likes to do work around his house and attend sporting events and concerts. He also loves to go camping frequently with his family.



**Master Road Scholar  
Dennis McCarthy**

Dennis McCarthy is the Public Works Director in Raymond. He has worked for twenty years as the head of Construction Services at Dufrenne-Henry and with other engineering companies, including CLD and CDM. He has been the Public Works Director in Raymond for ten years.

Dennis enjoys taking classes because they allow him to stay current with new advances. He's found the courses to be very helpful by allowing him to network and share ideas with his peers. Dennis "previews" classes to see if he should send his employees to them. He has learned a lot from the courses and has found the RSMS program to be particularly useful.

The selectman in Raymond have been very supportive of Dennis's work in the Road Scholar program. The Town of Raymond also two other Master Road Scholars and two employees on their way to becoming Master Road Scholars. The selectmen like the level of involvement of the department in this program and how much they've been able to learn from the classes.

Dennis and Calista have been married for 27 years. They live in Auburn, where he is the deputy fire chief. They have two children. Erin is an English teacher and John is a graphic artist. Dennis and Calista enjoy traveling, particularly out west, to the Caribbean, and soon to Europe.

Congratulations to Master Road Scholar Dennis McCarthy



**Master Road Scholar Glen Tuttle**

Glen Tuttle is the Supervisor of the Public Works Department at the University of New Hampshire. Glen has been at UNH for 28 years. Before working at UNH he worked for a paving company.

Glen takes classes to stay abreast of all of the new information and technology that is continuously being generated. He likes to learn different approaches to doing things. He has found that all of the workshops have offered him new and helpful approaches to his work. He also likes to take the opportunity to say 'hi' to his colleagues.

His supervisors think that it's a good thing that Glen has worked so hard to achieve Master Road Scholar status. His continuously expanding knowledge allows him to do his job better.

Glen has been married to Dawn for 28 years. They have two sons, John and Adam. Glen enjoys spending time outdoors and especially enjoys the summer. He uses his free time to ride his motorcycle, and to go camping, canoeing, and hunting.

Congratulations to Master Road Scholar Glen Tuttle!



# Where to Place Marked Crosswalks? It Depends!

Crossing roads is dangerous. Motorists must slow or stop to enable safe pedestrian traffic. Marked crosswalks are one way to provide pedestrians the right of way. Improperly placed, however, they can put pedestrians at great risk.

MUTCD Section 3B.17 has specific standards and recommendations for marking crosswalks. (See page 11 to obtain a copy of the MUTCD.) Less clear is where to place them. This article will discuss the factors to consider in these decisions. It draws from a recent FHWA report of pedestrian injuries at intersection and midblock locations.

## What is a Marked Crosswalk?

A "marked" crosswalk has lines of paint, thermoplastic, tape, or other material. The lines themselves legally define a crosswalk. At intersections, laws define a crosswalk whether or not marked. A crosswalk is that part of an intersection that connects sidewalks on opposite ends of a road. If there is a sidewalk on only one side, the crosswalk is in line with it to the other side.

Principally markings, but also other devices, help pedestrians and motorists define where crosswalks exist. Motorists expect to drive at the posted speed between intersections. They look for cars more than pedestrians at intersections. The MUTCD and state rules require marking other traffic control devices to alert drivers of crosswalks. (See *Road Business*, Fall 2001, p.1-2.) Whether or not they are marked, motorists are legally compelled to stop at intersection crosswalks. Some pedestrians walk on unmarked crosswalks expecting motorists to abide by that definition. When motorists don't, pedestrians get hurt.

The FHWA study also shows that pedestrians are often hurt at marked crosswalks. They guide pedestrian to the best place to cross. They show motorists and pedestrians that a legal crosswalk exists at a particular location. Where to place them depends on many factors.

## The Factors

As expected, researchers found that pedestrian injuries were fatal or more serious on roads above 35 mph than below it. Unexpected *Road Business*, Fall 2002, Vol. 17, No. 3

was the finding that speed limit was not a significant factor for crash frequency. The following factors did influence pedestrian crash rate.

Pedestrian and motorist differing definitions of a crosswalk.

Whether the crosswalk is marked or unmarked.

Vehicle traffic volume.

Pedestrian traffic volume.

Number of vehicle travel lanes.

Other treatments, such as curb extensions, raised crossing islands, traffic and pedestrian signals, roadway narrowing, enhanced overhead lighting, and traffic calming measures.

## Recommendations for Marked Crosswalk

Agencies should use marked crosswalks with the "other treatments" described above. Cities and towns should consider marked crosswalks for the following conditions.

- Where vehicular traffic, when stopping for a stop sign or red light, might block pedestrian traffic. (Also note the location of the stop line; see *Road Business*, Summer 2002, p.6-7.)
- At non-signalized street crossing locations in designated school zones.

At other non-signalized locations, many of the above factors influence pedestrian crash frequency. Municipalities should, therefore, seek assistance of a traffic engineer. Properly placed, marked crosswalks increase pedestrian safety and mobility. Improperly placed, the municipality has placed pedestrians at risk of serious, at times fatal, risk.

Source:



*Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations: Executive Summary and Recommended Guidelines.*  
FHWA-RD-01-075, Federal Highway Administration, McLean VA  
March 2002

# Publications

University of New Hampshire Technology Transfer Center

Copies of the following books and pamphlets, and our complete list of publications, are available through the UNH T<sup>2</sup> Center. When requesting an item with a charge, please include the check with your form. If ordering by mail, follow the instructions below. To request by telephone, call 603-862-2826, or in NH, 800-423-0060. You can also request by fax to 603-862-2364, on-line at [www.t2.unh.edu](http://www.t2.unh.edu), or by e-mail to [t2.center@unh.edu](mailto:t2.center@unh.edu)

The following materials are available free of charge.

\_\_\_\_ *UNH T<sup>2</sup> Center Publications and Video Catalog.*

\_\_\_\_ *Another Sleepless Night?* From Primex<sup>3</sup>, this publication gives guidelines for more productive “all-nighters” during winter operations.

\_\_\_\_ *Calcium Chloride Package.* A package of articles and pamphlets explaining the benefits of deicing with calcium chloride.

\_\_\_\_ *Deicing, Anti-icing, and Chemical Alternatives.* Informative fact sheet discusses the benefits of anti-icing, deicing, prewetting, and liquid chemical alternatives.

\_\_\_\_ *Guidelines for Spring Road Use Restrictions.* A system that must be started in the fall, for setting load limits in the spring.

\_\_\_\_ *Local Low Volume Roads and Streets.* Basic road design guidelines, materials, and maintenance information for town officials, crew managers, and road managers on rural streets and other less-traveled roads.

\_\_\_\_ *Manual of Practice for Anti-icing for Local Roads.* Published by the UNH T<sup>2</sup> Center in 1996, this manual explains the difference between deicing and anti-icing, and it describes aspects of a good anti-icing program.

\_\_\_\_ *The Salt Storage Handbook.* A practical guide for handling deicing salt. Published by the Salt Institute.

\_\_\_\_ *Snow Disposal Guidelines.* Environmental Fact Sheet with recommended guidelines for snow disposal.

\_\_\_\_ *Snow Equipment Preventative Maintenance.* Flyer discusses general repairs and maintenance for sand spreaders, plow equipment, dump bodies and hydraulics.

\_\_\_\_ *The Snowfighter's Handbook.* A practical guide for snow and ice control before, during, and after a storm. Published by the Salt Institute.

\_\_\_\_ *Speed Limits: A Guide for Vermont Towns.* Published by the Vermont Local Roads Program, this guide provides advice to set speed limits. NH Speed Limit RSAs—265:60, 265:62, 259:93, and 259:118.

\_\_\_\_ *Things to Know Before You Buy a New Plow.* Reprinted from a previous edition of Road Business, this article points out recommended specifications for snow plows, considering New Hampshire's climate.

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## To Request Material by Mail

Check the items you would like to receive. Fill out this form and include a check in the envelope, if necessary. Cut out this page and mail to the UNH T<sup>2</sup> Center.

Name: \_\_\_\_\_

Position: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

# Videos

*University of New Hampshire Technology Transfer Center*  
**Road Business, Fall 2002, Vol. 17, No.3**

The following videos are available from the UNH T<sup>2</sup> Center Video Library. You can have five videos for a two-week period with no charge. To request by mail, check the videos you would like to borrow (up to 5), fill out the mail request form, staple closed, affix stamp, and mail. To request by telephone, call (603) 862-2826 or (800)423-0060 (in NH). Visit our complete publication and video catalog on our website at <http://www.t2.unh.edu>. Or email [t2.center@unh.edu](mailto:t2.center@unh.edu)

\_\_\_\_ **DC-254, Soil Erosion and Sediment Control**, 28 min. This video shows how soil erosion and sedimentation are related. It describes in detail various types of erosion and erosion prevention/control procedures

\_\_\_\_ **ST-235, Chainsaw Safety**, 21 min. Demonstrates the do's and don'ts of chainsaw operation.

\_\_\_\_ **PA-217, Safety Restoration Snow Removal Guidelines**, 25 min. Presents snow and ice removal safety hazards, and methods for correcting them. Also discusses the importance of snow and ice removal management plans and how they can be implemented.

\_\_\_\_ **M-243, Plow Power**, 15 min. Modern techniques for efficient and effective plowing, focusing on plowing in towns and cities. Techniques include main streets, intersections, cul de sacs; wing blade, tandem blade, and reversible blade usage, and one-way streets.

\_\_\_\_ **M-244, Asphalt Emulsion Spray Applications**, 24 min. Describes asphalt emulsion, and shows procedures in applying it

for surface treatment. **Recycling Roads with Asphalt Emulsions**, 20 min. Recycling dirt roads with cold-mix recycling, and the advantages of it.

\_\_\_\_ **M-302, Winter Operations Training Program: Pre-Season Preparation**, 30 min. This video discusses how to mount snow removal equipment, including reversible plow, B-plow, light-duty wing, and heavy-duty wing. It provides a step-by-step approach to conducting a pre-season check of plow trucks and all mounted equipment.

\_\_\_\_ **M-303, Winter Operations Training Program: Plowing Techniques**, 30 min. This video discusses the basic snow plowing techniques and procedures for clearing two-lane roads and multiple-lane highways. It also outlines how to use the heavy-duty wing, ice blade, V-plow, and the reversible plow. The video also covers special techniques for clearing intersections, bridges, railroad crossings, ramps, gores, curbs, and islands.

\_\_\_\_ Video Catalog.

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## Milestones:

*Roland Bergeron* has retired from Litchfield. He was the Road Agent.

*Doug Hemingway* is the new Road Agent in Epsom.

*David Leel* has joined New Ipswich as the Road Agent.

*Tom Smith* is the new Road Agent in Landaff.

*Bruce Thomas* is now the Public Works Director in Bedford.

*Grafton, Lyndeborough, Peterborough and Westmoreland* have joined the New Hampshire Public Works Mutual Aid Program.

## Websites:

There are many helpful websites for public works employees. If you have others that your colleagues could benefit from, send the urls to [t2.center@unh.edu](mailto:t2.center@unh.edu). We'll publish the site and your name in *Road Business*. (No commercial sites please).

UNH T<sup>2</sup> Center: <http://www.t2.unh.edu>

DigSafe <http://www.digsafe.com/>

Institute of Transportation Engineers  
<http://www.ite.org/>

Recycled Materials Resource Center  
<http://www.rmrc.unh.edu/>

Stormwater Manager's Resource Center  
<http://www.stormwatercenter.net/>

ITE Briefing Sheets on intersection safety  
<http://www.ite.org/library/IntersectionSafety/briefing.htm>

## Free Millennium Edition MUTCDs Available to Municipalities

From a grant from the Highway Safety Agency, the New Hampshire Department of Transportation has purchased 148 Millennium Editions of the Manual of Uniform Traffic Control Devices



(MUTCD). The editions purchased are often referred to as the "Perfect Bound" version, meaning they are bound rather than in a notebook.

These MUTCDs are available to municipalities on a first-come, first-serve basis, one copy per municipality. Municipalities that would like a copy should contact the UNH T<sup>2</sup> Center as soon as possible; they will go quickly. Contact information is on page 2 and page 12 of this issue.

### PW.NET

Want to know what is happening in other towns? Learn the very latest in regulations? Need a place to ask questions of other public works officials? Want to be the first to receive notifications of UNH T<sup>2</sup> Center workshops? Then, subscribe to PW.NET. It's free. Send an email message to: [kathy.desroches@unh.edu](mailto:kathy.desroches@unh.edu)

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For instance:

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# Road Business

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<http://www.t2.unh.edu>



## Calendar

| <i>October</i>                   |   |   |  |                                      |
|----------------------------------|---|---|--|--------------------------------------|
| 30—Winter Operations, Portsmouth | 1—Winter Operations Equipment, Hillsboro              | 2—Winter Operations Equipment, Lincoln            | 3  | 4                                    |
| 7                                | 8—Spec, Bids, and Contracts, Manchester               | 9   | 10—Specs, Bids, and Contracts                      | 11                                   |
| 14                               | 15  | 16  | 17   | 18                                   |
| 21                               | 22—Cost Estimating and Budget Preparation, Manchester | 23  | 24—Cost Estimating and Budget Preparation, Lincoln | 25                                   |
| 28                               | 29—Municipal Garage Compliance, Manchester            | 30  | 31—Municipal Garage Compliance, New London         | 1—Basics of a Good Road, Manchester  |
| <i>November</i>                  |   |   |  |                                      |
| 4                                | 5   | 6—Mutual Aid, Lincoln                             | 7  | 8                                    |
| 11                               | 12  | 13—Mutual Aid, Dover                              | 14   | 15                                   |
| 18                               | 19  | 20—Mutual Aid, Manchester, NHMA Annual Conference | 21--NHMA Annual Conference                         | 22                                   |
| 25                               | 26  | 27  | 28--Thanksgiving                                   | 29                                   |
| <i>December</i>                  |   |   |  |                                      |
| 2                                | 3   | 4   | 5  | 6                                    |
| 9                                | 10  | 11  | 12—Gravel Road Maintenance, Hillsboro              | 13—Gravel Road Maintenance, Plymouth |