On the Road in New Hampshire

Working with Planning Boards

Developing a working relationship with the local Planning Board (PB) is valuable for both the highway departments and PBs.

In Lempster, Richard Fairweather was a member of the PB before he became Road Agent. He is the PB’s agent for driveway permits. As part of the PB, he says that he “has the opportunity to provide practical input into the impacts of growth.”

As a department head, Pete Lavoie, Director of Community Services in Dover, is a member of the PB. He reviews plans and sends his opinions to the board. Pete has worked for Dover for many years and has seen a lot of changes. His longevity with the city and his expertise contribute strongly to the PB’s reliance on him.

Dave Lent of Merrimack says that two years ago there were weekly meetings to review subdivision and site plans. Public works, the conservation commission, deputy fire chief, the waste water inspector, and planning staff attended the meeting. They addressed issues of concern to PW and safety, such as turning and cul-de-sac radii, both effecting emergency response and snow removal.

Currently, the developers and their engineers attend meetings to review conceptual plans for developments before making formal presentations to the PB. This allows all parties to assess the impact of a proposal. From the developer’s point of view, the expectations of town are presented before time and money are spent on proposed projects.

In Goffstown, Town Engineer Meghan Theriault’s responsibilities include working with the PB. Two weeks prior to a PB meeting there is a Technical Review Committee (TRC) meeting. The TRC reviews all plans on the agenda of next the PB meeting. Each member of the TRC submits written comments to the PB. Applicants generally use the TRC comments to address some issues before the next PB meeting. Meghan believes that it is important that she attends all PB meetings and that continued on page 7
Dave Fluharty, Director of UNH T² Center Retires

After serving almost 12 years as the director of the UNH Technology Transfer Center, David H. Fluharty retired on July 29, 2005. Dave joined the center in October 1993 and said that he enjoyed his time working with such an appreciative and knowledgeable clientele.

Dave grew up in Iowa and joined the Navy as an officer in the Civil Engineer Corps after college. Dave served for 20 years. After retiring he began his second educational journey at the University of New Hampshire. He earned his Ph.D. in sociology and began teaching at both UNH and the College for Lifelong Learning. Dave said that his occupational and educational experiences have helped him with his role at the center.

Dave’s post-retirement plans include creating a Website to serve local road managers, spending more time with family, including his three daughters, eight grandchildren, and one great-grandchild; and moving to Five Islands Harbor in Georgetown, Maine with his wife Linda. Dave and Linda have been married 20 years and Dave said he’s ready for the next chapter in their lives and, as always, it will be nothing short of an adventure.

Thank you, Dave, for your unprecedented hard work, leadership, and dedication. Farewell on life’s continued journey and we’ll miss you!

Charlie, Kathy & Katy

Katy Claytor, Linda Hjortland, Dave Fluharty, and Kathy DesRoches at Dave’s Retirement Party.
Driveway Permits

Driveways allow access to the public way. RSA 236:13 provides that municipalities may control the connection of private roads and driveways to local highways. Also, 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 irrelevant if a driveway connection pre-dates the town’s permit system. If any driveway connection threatens the integrity of the highway due to plugged culverts, erosion, siltation, etc. the planning board or its designee, can require the owner to repair it. If the owner refuses, then the town may perform the work and then assess the cost to the owner.

Driveway “permits are for the drivers’ safety and the owner of the driveways safety. Every driveway is a point of possible conflict between vehicles. Permits allow the municipality the opportunity to work with the owner to eliminate potential drainage issues. They are a useful process for municipalities to control driveway access to the roads,” says Greg Placy, engineer in N.H. Department of Transportation’s (NHDOT) District One. Placy advises reviewing sight distance when issuing driveway permits. Sight distance is the length of the roadway that a driver can see ahead (see page 8 of the Summer 2005 issue of Road Business).

To allow for sight distance issues, the NHDOT driveway policy states that there will no more than two driveways, entrances, exits, or approaches from any one highway to any parcel of land unless the frontage along the highway exceeds 500 feet.

Driveway construction may affect the structural integrity and safety of the road or street. This may result in increased maintenance costs or liability for municipalities. A driveway permit allows municipalities to:

• Provide for maximum safety for the public while minimizing conflict points,
• Monitor the design and construction of driveways,
• Enforce minimum distances between driveways, and
• Maintain highway right-of-way drainage.

Local Government Suggestions

Reasonable regulations ensure driveways are as safe as possible. Adequate staffing is necessary to process permits. To handle permitting questions, provide staff with consistent training.

For local agencies creating a new or revamping an old driveway permit, the following advice comes from the National Cooperative Highway Research Program Project 304 on Driveway Regulations. It states that policies should:

• Be consistent, fair, and flexible,
• Contain language that is easy to understand,
• Provide effective literature,
• Should not assume that the applicant understands the regulations and specifications, and
• Provide a thorough explanation of basis for decision when a permit is denied.
• Changes in use, i.e. residential to commercial or vice versa should require a new driveway permit with a review to determine if it meets current criteria.

Driveway permit enforcement is more effective when it is part of the development code rather than a street code. Land development codes provide for access review with each change of the site. With street codes, an established driveway tends to be forever. Therefore, it is not advisable to use the driveway permit to regulate development when development code is available.

Sources:
Hard Road to Travel, Local Government Center, 2004
NHDOT Driveway Policy
Culvert Inspection and Rehabilitation

Most municipalities in NH own hundreds, if not thousands, of culverts. As they age, culvert deterioration can become a serious financial problem for agencies. This article will discuss culvert inspection and repair as published in a recent Transportation Research Board study.

Inventories and Inspection

Creating and maintaining a culvert inventory allows agencies to know and track the condition of their culverts. An inventory saves time and money by enabling municipalities to schedule needed repairs and eliminating or reducing the number of failures.

A regular inspection schedule assists road managers to plan individual culvert inspections. Municipal inspection guidelines may vary depending on the size, type, and location of the culvert. Inspect major pipes at least every 3 years and more often where conditions are harsh, such as where there is brackish water, seawater, acidic runoff, or industrial discharge. Inspections should include channel rating (to indicate the amount of the scour), embankment erosion, siltation, etc. expected.

To create a successful inventory and management system, road managers may use these tips:

- Establish a standard set of guidelines to perform inspections,
- Train the inspectors to identify defects and severity, and to accurately complete the inspection reports,
- Collect data consistently, and
- Determine if a pipe needs repair, rehabilitation, or replacement during the inspection and report the findings.

One benefit of a culvert inspection and management system is to justify funds and prioritize work. An inventory reduces the likelihood that a pipe will deteriorate to a state where the roadway surface will dip or fail completely, resulting in the need to do costly unscheduled repair or rehabilitation immediately.

Repair and Rehabilitation

Repair culverts to keep them in uniformly good and safe condition. Repair activities include patching, crack sealing, invert paving, lining, or joint work. Correcting light deterioration detected by the inventory avoids more future serious problem.

Create specifications so contractors understand local requirements and expectations of culvert repair or rehabilitation work. Many agencies use construction specifications to address issues and requirements when a pipe is installed. However, when a pipe is lined, the requirements, issues, and processes are different.

Repair Strategies

According to the study, culvert lining is the most reported method of permanent structural stabilization. When managers have insufficient funds to perform major or deep excavations, the roadway is paved, or the traffic volume is high, they have used invert replacement, insertion of a pipe inside the deteriorating pipe, or installation a lining to avoid cut and cover.

The liner wall needs to be as thin as possible to maximize culvert flow capacity. Liners are forced through the culvert (pipe jacking) or pulled through. When repairing a segment or small portion of a culvert, install a section or two of liner by positioning the liner at the deteriorated area and jacking against the existing culvert.
Consider culvert replacement instead of rehabilitation when a pipe deteriorates to a point where:

- its structural integrity or soil support is lost;
- there are insurmountable problems, such as soil migrating through pipe joints;
- the roadway over the pipe is lost (excessive deflection);
- the elevation of the invert needs to be changed; or
- there is a lack of hydraulic capacity.

A culvert maintenance program saves the town money because repairs are managed and unscheduled costly emergency work is reduced.

Note: The NHDOT specification for culvert lining is 603.869 XX. Contact the UNH T² Center for a copy.

Source: Assessment and Rehabilitation of Existing Culverts, A Synthesis of Highway Practice, Transportation Research Board, NCHRP Synthesis 303, 2002

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### High Visibility Clothing

High visibility clothing (ANSI 107 standard performance) refers to reflective and florescent vests, shirts, pants, hats, etc. that workers should wear to make them more visible when working near traffic and heavy equipment. The types of clothing one should wear depend upon the hazards they are likely to face.

- **Class 1 garment:** for workers that are separated from vehicular traffic of less than 25 mph. where background setting and worker tasks are not complex.
- **Class 2 garment:** necessary for greater visibility during inclement weather; where work background is more complex and close to moving traffic or vehicles; worker’s attention will likely be diverted from traffic traveling 25-50 mph.
- **Class 3 garment:** where traffic speed is greater than 50 mph; workers must be conspicuous.

Source: Transportation Builder, Summer 2005, ARTBA, pg. 62

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### Options for Culvert Maintenance

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<thead>
<tr>
<th>Strategy</th>
<th>Objective</th>
<th>Work Option</th>
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<tbody>
<tr>
<td>Routine Maintenance</td>
<td>Keep a culvert in a uniform and safe condition by repairing specific defects as they occur</td>
<td>-Debris and sediment removal</td>
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<td></td>
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<td>-Thawing frozen culverts</td>
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<tr>
<td>Rehabilitation</td>
<td>Takes advantage of the remaining usable culvert structure to recondition a culvert</td>
<td>-Joint sealing</td>
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<td>-Mortar repair</td>
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<td>-Invert paving</td>
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<td>-Scour prevention</td>
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<td></td>
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<td>-Ditch cleaning &amp; repair</td>
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<tr>
<td>Upgrade to Equal Replacement</td>
<td>Upgrade to provide service that is equal to that provided by a new structure</td>
<td>-Addition, repair, or replacement or appurtenant structures</td>
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<tr>
<td></td>
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<td>-Lining of the barrel</td>
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<td>-Provision of safety grates or safety barriers</td>
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<td></td>
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<td>-Lengthening of culvert</td>
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<td>Replacement</td>
<td>Provide a completely new culvert with a new service life</td>
<td>Can be accompanied by:</td>
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<td></td>
<td></td>
<td>-Realignment</td>
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<td></td>
<td></td>
<td>-Hydraulic structural and safety improvements</td>
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<td></td>
<td></td>
<td>-Change in culvert shape or material</td>
</tr>
</tbody>
</table>

*This table illustrates work options for different strategies, such as routine maintenance, preventative maintenance, rehabilitation, and replacement. For each strategy the objectives are different and at least two work options are listed.*
Citizens expect safe, efficient, and satisfactory municipal services. To keep customers happy, deliver safe, efficient, and satisfactory services and structure services in a way to make them convenient for the customer.

**Education**

Education and awareness are powerful tools that can promote departments and reduce communication errors with the public. Inform the public of the departmental mission, services, and how the public can contribute to improve or create additional services.

- Create kiosks of departmental information, such as services and contact information.
- Organize an open house and invite the public.
- Use newsletters to inform readers of current projects and future goals, as well as, plans to reach these goals. Make copies readily available.
- Use the web. Ensure the website is easy to navigate. Publish contacts, hours of service, road conditions, ordinances, and special events.

**Customer Feedback**

Seek customer feedback to improve services. A happy customer tells others about great service. Ask for feedback in multiple ways and tell customers of all methods to provide feedback.

- Have a “Suggestion Box” on-site.
- Welcome walk-ins during normal business hours.
- Post the comments, ideas, and suggestions; actions taken in response; and any results. Keep the posts anonymous. Posting comments demonstrate that the customer’s input is taken seriously. It also informs others of current customer service issues and may prevent repeated complaints.
- Post positive feedback and success stories to boost employee morale and productivity. Employees will feel valued and appreciated.
- Use surveys to learn of desired services, what is and isn’t working, and what could work better. Learn why customers feel the way they do and how services can be improved or created to meet their needs.

**Customer Complaints**

Complaints are a way to know what customers want. The average person tells 5 people about the good service they receive and 20 people about bad service. Once corrected, complaints build loyalty as customers will see the department more favorably. Use these steps for customer complaints.

1. Thank the customer for the complaint.
2. Explain why the complaint is helpful.
3. Apologize for the mistake—this doesn’t mean accepting responsibility.
4. Promise to do something about the mistake immediately—this may mean contacting someone else.
5. Get all the necessary information.
6. Correct the mistake.
7. Check customer satisfaction.
8. Prevent future mistakes.

If a written complaint is received, respond in writing within a week and use clear and easy to understand language. Use a complaint track system to resolve problems.

When working with angry customers diffuse their anger by acknowledging their frustration, apologize, and explain any plans to alleviate the problem. Ask for their approval regarding the action to be taken. Once taken, contact the customer to ensure the situation was handled to their satisfaction.
This is the first Roads Scholar level. To achieve this level the scholar has participated in at least thirty contact hours, or six one-day workshops.

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ROADS SCHOLAR II

This is the second Roads Scholar level. To achieve this level, the scholar has participated in a least 50 contact hours or 10 one-day workshops and has covered a set of subject areas, including Road Design and Construction Basics, Other Technical, Tort Liability or Safety, and Supervision or Personal Development.

Richard Abbott
David Almon
Edwin Betz
Dan Bissonnette
David Cantor
Reagan Clarke
Clark Craig III
Douglas Deporter
David Desfosses
Dennis Desrochers
Marguerite Dumont
Donald Dunlap
David Duquette
Gordon Ellis
Joseph Fagnant
Kenneth Fanjoy
Harold Fife
Larry Gay
Chuck Grassie
David Herlihy
David Kenneally
Michael Kerczewich
Everette Kern
Dan Lavoie
Pete Lavoie

Clayton Philbrick
Rick Plankey
Michael Plante
Scott Pollock
Luke Powell
Calvin Prussman
Ed Richards
John Riendeau
Robert Ripley
Emilio Risoni
Wayne Robinson
William Ruoff
Kenneth Salisbury
Ralph Sanders
Jeffrey Sarette
Staley Sawyer
Mary Shaw
Alan Sheldon
Kevin Sheppard
John Silva
Scott Simons
Patrick Smith
Robert Smith
John Soulia
Marc St. Pierre
Francesstown
Keene
Chesterfield
Nashua
Laconia
Newbury
New Boston
Portsmouth
Bedford
Brentwood
Milford
NHDOT
Goffstown
Somersworth
Dunbarton
Manchester
Milford
New Durham
Milton
Walpole
Hooksett
Rochester

Robert Levesque
Randall MacDonald
Jim Major
Dennis Marquis
Christopher McCormack
Warren Miner
Jim Mountford
Mike O'Neill
Carl Quiram
Thomas Richter
Birney Robbins
Patrick Roberts
Steve Rougeau
Randall Smith
Timothy Smith
George Sturgis
Steve Swain
Allan Swijadas
Mark Tapply
Wayne Thompson
Gerard Turco
Summer Weeks
Dave Wholley
Larry Young

Douglas Starr
Dennis Stevens
Eric Stevens
Ken Stocker
Clark Stoddard
Robert Sullivan
Craig Sykes
Michael Tarr
Bruce Thomas
Joe Toupin
Ed Touville
William Touville
Ed Trask
Roger Trempe
David Trudell
John Trythall
Don Vachon
Fred Wallace
Bart Wappes
Karen Welch
Dennis White
Larry Wiggins
Bruce Williams
Thomas Willis
Troy Wilmott

Jaffrey
Sutton
Plainfield
Alton
Merrimack
Raymond
Nelson
Manchester
Bow
Enfield
Hanover
Merrimack
Dublin

高潮

Durham
Hanover
Concord
Nashua
Plymouth
Concord
Gooffstown
Portsmouth
Keene
Bartlett
Milford
Sullivan
Lebanon
Exeter
Northfield
Boston
New Ipswich
Bridgewater
NHDOT
Northfield
Salem
Hooksett
SENIOR ROADS SCHOLAR

This is the third Roads Scholar level. To achieve this level, the scholar has participated in at least 70 contact hours or 14 one-day workshops and covered the range of topics required for Roads Scholar II.

Bruce Adler
Chesterfield

Larry Jackson
Littleton

Doug Almon
NH DOT

Jean Marie Kennamer
Derry

Albert Anderson
Hancock

Kim Kerewich
Alstead

Ann Bedaw
Swanzey

Carl Knapp
Weare

Bart Bevis
Chesterfield

Earl Labonte
Lebanon

Harold Blanchette
Hopkinton

David Leel
New Ipswich

Allan Bolduc
Meredith

Ken Louzier
NH DOT

Scott Brooks
Freedom

Robert Lovering
Merrimack

William Byrne
Keene

Sharon Lucey
Dover

Ed Chase
Merrimack

Steve Lucier
Bradford

Mike Chase
Hanover

Joe Maguire
Merrimack

Richard Clark
Northfield

Charles Moore
Bridgewater

Michael Clarke
New Durham

Robert Nicol
Northfield

Reggie Cleveland
Henniker

Dennis Patnoe
Lancaster

David Cook
Mason

Dan Phillips
Rochester

David Crosby
Alstead

Jim Plante
Chesterfield

Gene Cuomo
Fitzwilliam

Glen Smith
NH DOT

Perry Day
Amherst

Richard Smith
Lebanon

Charles Dylyn
NH DOT

Randy Stevens
Enfield

Dennis Eastman
New Ipswich

Lee

Greg Eastman
New Ipswich

Merrimack

Robert Eaton
NH DOT

Jeff Strong
Claremont

Wayne Elliott
Gilford

Buddy Sweeney
Walpole

David Foster
Somersworth

James Terrell
Washington

William Fralick
NH DOT

Edward Thayer
Dover

Henri Frechette
Claremont

Paul Vlasich
Nashua

Peter Goewey
Rindge

Paul Wallace
Nashua

Dean Hooper
Claremont

Donna Walton
Lincoln

William Willey

MASTER ROADS SCHOLAR

This is the final Roads Scholar level. To achieve this level, the scholar has participated in at least 100 contact hours or 20 one-day workshops and covered the range of topics required for Roads Scholar II.

Ernest Allain
Carter Ames
Jeffrey Babel
George Bachelder
Ernie Ball
Brian Barden
Doug Barnard
Peter Beard
Brian Beers
Paul Belanger
Robert Bennett
Anthony Bergeron
Michael Bernard
Bruce Berry
Marty Bilafer
David Blanchard
Allan Brown
Mark Bucklin
Charles Buttrick
Ralph Carter
Scott Clarke
Chum Cleverly
George Conkey II
Alan Côté
Alex Cote
John Cote
Carlton Currier
Ken Daniels
Dan Davis
Richard Davis
Roger Deboisbriand
James Dicey
Ronald Dubois
Lee Dunham
Michael Faller
John Fernald
Timothy Fiske
Jay Fitzgerald
Christopher Flagg
Clayton Foote Jr.
Mark Fuller
Kurt Grassett
Nate Hadaway
Kevin Hammond
Ronald Hansen
James Hanson
Mike Hillhouse
Frank Hoye
Scott Keddy
Walter Kiblin
Robert Kline
Ken Knowlton
Ron Lavoie
Arthur Le Blanc
Richard Lee

George Leel
David Lent
Norman Litalien
Ray Mardin
John Margeson
Dennis McCarthy
Theresa McGinnis
Fraser Michaud
Bruce Moreau
Sheldon Morgan
Mark Ober
Gary Paige
Peter Paris
Paul Parker
Thomas Plourde
Peter Prentice
David Quint
Mike Reifke
Ken Roberts
Carl Somero
Richard St. Hilaire
John Starkey
Edward Stewart
Robert Strout
Timothy Sweeney
Frank Swift
Bruce Tatro
George Turcotte
Glen Tuttle
Rick Washburn
Gary Webster
Keith Weed
James Wilson
Tom Woodley

NH DOT
Merrimack
Nashua
Campton
Henniker
Raymond
Hampton
Newport
Merrimack
Gilford
Ashland
Francestown
Sharon
Sutton
Francestown
Sandwich
Dover
NH DOT
Alton
Milford
Kingston
Seabrook
Atkinson
North Hampton
Bow
Hampton
Keene
Franklin
UNH
Middleton
Hudson
Charlestown
Northwood
Claremont

UNH T^2 Center, Road Business, Fall 2005, Vol. 20, No. 3  Special 2005-D
Improving customer service may seem to be an immense task but it is a valuable and worthy goal that gets easier with time. Employees will develop an improved capability to handle complaints.

Adopting tips from this article will improve customer relations. Customer service is not just for the customer, organizations that practice good customer service also reap the benefits.

Sources:
Band, William, Creating Value for Customers.
Barlow, Janelle, Moller, Clause, A Complaint is a Gift, 1996

continued from page 1

there is value to the TRC process because of departments are communicating.

A new process in Goffstown is driveway reviews. The National Fire Protection Association specifies rules for driveways. Previously, once a driveway permit was issued, no one checked to see how the driveway was laid out between the road to the house. There were times where the slope of the driveway was too steep for emergency vehicles. Now that doesn’t occur.

Meghan believes that citizens are happier with the new permit processes in town. They know what to expect. The PB has helped Meghan as there have been times where a developer didn’t do all that they promised. The PB stood behind their decisions, contacting the developer to ensure that all promises were kept.

Meghan suggests that towns would benefit from the technical review process where written comments are submitted to the PB. Towns with a smaller staff may want an outside party to review plans asking the developer to pay for the review.

Sources:
http://www.nfpa.org/assets/files/PDF/ROP/299-02-rop.pdf, September 2, 2005
http://www.pruverani.com/ subdivisions/sub36_site.asp?S=36, September 2, 2005

Special Thanks to: Ken Daniels, Enfield; Robert Eaton, NHDOT; Bob Emro, UNH; and Dave Lent, Merrimack for technically reviewing this issue of Road Business. Thanks to Richard Fairweather, Lempster; Dave Lent, Merrimack; Jamie McCullouch, Dover; Greg Placy, NHDOT; and Meghan Theriault, Goffstown for their assistance with Road Business content.
An Effective Public Works Leader Delegates

Public works leaders are busy people and finding ways to effectively handle the mountain of work is a critical skill. When people try to do everything, they often become exhausted and ineffective managers. By engaging the team, managers can dramatically increase their effectiveness. Many try to do everything themselves, effectively hoarding work. They believe that if they can do the job well and do it right, why delegate?

A public works manager’s job is to manage work. The town expects the department to get things done and the volume of work is generally too great for one person to do alone. Therefore, the ability to delegate effectively is an essential skill for the public works leader and manager.

Effective delegation requires a combination of several core competencies.

- Communications Skills,
- Responsibility, and
- Managing Resources.

Communication skills are essential to effective delegation. One must clearly articulate their desired outcomes. When the mission is misunderstood valuable time and effort are lost. Even though poor communication is the issue, this causes some to revert back to “I should have done it myself.”

Responsibility. Delegation does not mean that work is passed on and never thought of again. It requires monitoring and reviewing work to ensure the task is progressing as directed. If the manager is asked about the status of a delegated project or task they need to know the answer. “I gave it to Bob” is not an acceptable response. The delegator has a duty to touch base with “Bob” occasionally to know the status of the work.

Managers are responsible to ensure delegated work is done effectively and correctly. Check on the progress, identifying mid-course corrections that may be needed. It is necessary to track delegated tasks. Some managers may want to use tracking software, others a handwritten list.

Managing resources is akin to delegation and leadership. Effectively managing a team of people is critical to providing quality services to the community. Delegation empowers others and builds teams with every success. Delegation is an indication of trust as the manager sends the message that the employee is trusted to do a good job. Over time, this helps employees to build confidence and become more skilled members of the team.

Through delegation, public works leaders can maintain balance with home, work, and community responsibilities. Learning to delegate is challenging. The ability to “let go” and the wisdom to know when to do this are important skills that take practice and perseverance. It is a valuable tool to build the skills and confidence of staff.

Source: Hann, Susan, APWA Reporter, January 2005, pg 32-33

NH Local Government Conference Sessions

These are a few of the public works sessions scheduled for the Local Government conference on November 17th.

- New Hampshire Public Works Association: Zakim Bridge & Wetlands
- New Hampshire Mutual Aid: Transportation Security Awareness
The following publications are available free from the UNH T² Center. Consult www.t2.unh.edu/video_pub/publist.html for a complete list of publications. To request by mail: indicate selection, complete form, staple closed, affix stamp, and mail. The completed form may also be faxed, 603-862-2364, or emailed, t2.center@unh.edu. To request by telephone, 603-862-2826 or 800-423-0060 (N.H. only).

___BMP’s for Routine Roadway Maintenance Activities in N.H. This manual provides information for personnel to select appropriate site specific BMP’s. The BMP’s are currently the most responsive control measures for protecting the environment. NHDOT & NHDES.

___Controlled Low-Strength Materials (CLSM). This report provides basic information on CLSM (flowable fill) technology, including application, material properties, mix proportioning construction, and quality control procedures. American Concrete Institute.

___Covered Bridge Manual. This manual provides technical and historic information on the preservation of covered bridges, including bridge components, engineering issues, and existing bridges. USDOT & FHWA.

___NHDOT Highway Classification and Available Aid. This resource provides information on the highway classification system and highway aid funds, including state aid, bridge aid, applications for estimates, highway block grants, and federal bridge aid replacement. NHDOT.

___NHDOT Guidelines for Temporary Erosion and Sediment Control and Stormwater Management. This document provides information on erosion control BMP’s as a routine part of daily work. NHDOT, NH Coastal Program, & NHDES.

___Tort Liability: NACE Action Guide. This guide explains liability and insurance for individuals, public agencies, and employees, who are concerned with local road maintenance. NACE, 1992.

___The Salt Storage Handbook. This handbook has information on handling deicing salt, including storage, quantity of salt needed, ordering salt, site selection, and a storage area checklist. The Salt Institute.

___The Snowfighter's Handbook. This handbook has information on snow and ice control, including training, equipment, planning, types of snow, calibration, salt application, spreading and plowing problems, and safety. Salt Institute.

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Material Request

Name: ___________________________________________ Title: ________________________________

Affiliation: _____________________________________ Mailing address: ___________________________

Town/City: ___________________________ State: ___________ Zip: ___________

Phone: ___________ Fax: ___________ Email: ___________________________
The following videos are available for a two-week loan. Consult www.t2.unh.edu/video_pub/vidinfo.html for a complete list. Five videos may be borrowed at one time at no charge. To request by mail, indicate selection, fill out the form on the reverse side, staple closed, affix stamp, and mail. The completed form may also be faxed, 603-862-2364, or emailed, t2.center@unh.edu. To request by telephone, 603-862-2826 or 800-423-0060 (in N.H. only).

___Cleaning and Clearing of Bridges, M-223, 13 min. Discusses the eight easy steps to clean and clear bridges, including tools that are involved and what repairs are anticipated. FHWA.

___Frost Action in Soils, M-273, 13 min. Describes formation of frost heaves, their effects, and frost action testing. CRREL.

___How CaCl₂ is Made and Used, M-263, 20 min. A two part video that explains usages for CaCl₂, how it is made, the stabilization process, and provides research results of CaCl₂ studies. General Chemical.

___New Hampshire Public Works Mutual Aid Program, PA-236, 10 min. This informational video explains the benefits of joining the Mutual Aid program.

___Snow Plow and Spreader Operation, M-242, 50 min. This three part video discusses the equipment needed for using a snow plow/spreader, daily inspections and equipment servicing, and demonstrates plowing and spreading techniques. NE DOT.

___Using Snow Plows on Motorgraders, M-297, 16 min. Describes plow types and conditions for their use, how to connect each type, and how to plow using the proper plow type. FHWA.

___White Gold, M-248, 26 min. Emphasizes the proper selection of snow equipment and discusses the advantages and limitations of various types of equipment, plows, and blades. New England Chapter APWA.

___Winter Operations Training Program: Pre-Season Preparation, M-302, 30 min. Discusses the usage of snow-removal equipment, including reversible plow, light and heavy duty wing, and provides guidelines on conducting a pre-season maintenance check.
Milestones:

Ed Betz, public works director in Peterborough retired.

Dave Fluharty, director of UNH T² Center, retired in July 2005.

Bill Fralick, NHDOT District 6 retired.

Stephen McKinley, NHDOT District 2 passed away August 24, 2005.

Websites:

N.H. Department of Safety Lab 1400:
http://www.gencourt.state.nh.us/rules/lab1400.html

N.H. Department of State Planning:
http://nh.gov/oep/programs/MRPA/index.htm

NHDES Fact Sheets:
http://www.des.state.nh.us/openme.htm

NHDOT Standard Road and Bridge Plans:
http://webster.state.nh.us/dot/standardplans/standardplans.htm

N.H. Pesticide licensing (Department of Agriculture):
http://agriculture.nh.gov/topics/pesticide_licensing.htm


Sign for T-Intersections

*MUTCD Section 2C.38 Two-Direction Large Arrow Sign (W1-7)*

T-intersections are often improperly signed. The Manual of Uniform Traffic Control Devices (MUTCD) specifies the W1-7 Sign (at right) for the T-intersection. It says:

- The Two-Direction Large Arrow (W1-7) sign shall be a horizontal rectangle.
- If used, it shall be installed on the far side of a T-intersection in line with, and at approximately a right angle to, approaching traffic.
- The Two-Direction Large Arrow sign shall not be used where there is no change in the direction of travel, such as at the beginning and end of medians or at center piers.
- The Two-Direction Large Arrow sign should be visible for a sufficient distance to provide the road user with adequate time to react to the intersection configuration.

Listservs

A listserv is a free way to use email to exchange information. To subscribe send an email to ListProc@lists.unh.edu. Leave the subject line blank, in the body of your message type:
Subscribe listname your name
For instance:
Subscribe pw.net John Doe

PW.NET

Want to know what is happening in other towns? Or, 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 T² Center workshops? Sign up for pw.net

RunOff.Talk

Want to discuss NPDES II issues and concerns? This list enables a dialog to clarify federal permits, and determine the best technical management for compliance. Use it to announce meetings and conferences.
### October

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<td>5—APWA Snow and Ice Conference</td>
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<td>7—Public Speaking, Manchester</td>
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<td>11—Winter Operations, Rochester</td>
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<td>13—Winter Operations, Swanzey</td>
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<td>17</td>
<td>18—Culvert Installation, Rochester</td>
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<td>20—Culvert Installation, Swanzey</td>
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<td>24</td>
<td>Basics of a Good Road, Somersworth</td>
<td>25—Municipal Permits, Lebanon</td>
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<td>Basics of a Good Road, Lebanon</td>
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### November

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<td>3—Erosion Control, Swanzey</td>
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<td>7</td>
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<td>9—Tort Liability, Manchester</td>
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<td>11—Veteran’s Day!</td>
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<td>16—LGC Annual Meeting*</td>
<td>17—LGC Annual Meeting*</td>
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<td>24—Thanksgiving!</td>
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<td>30—NHI Road Safety Audits, Manchester</td>
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### December

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<tr>
<td>5</td>
<td>6—A Hard Road to Travel, Lebanon</td>
<td>7</td>
<td>8—A Hard Road to Travel, Rochester</td>
<td>9</td>
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</tbody>
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*Topics include: Zakim Bridge, Wetlands, and Transportation Security Awareness*