

# INTERCHANGE

VOLUME 3 NUMBER 4

WINTER 1989

## "Patch Pan" and "Asphalt Paving Box"

### Save Time, Effort, and Money

"When you do some of this stuff yourself, you find easier ways of doing it...and better ways, instead of struggling." These are the wise words of John Garstka, Southampton's former highway superintendent, now retired but still active in the highway field. Over the years, he has developed two ingenious inventions that are so useful that they have been reproduced in other communities. The two items are a patch pan used off the back of a truck to make it easier to shovel cold patch into potholes, and an asphalt paving box for leveling off rough sections of roadway. Both devices are described below.



*John Garstka with his back saving patch pan*

#### Patch Pan

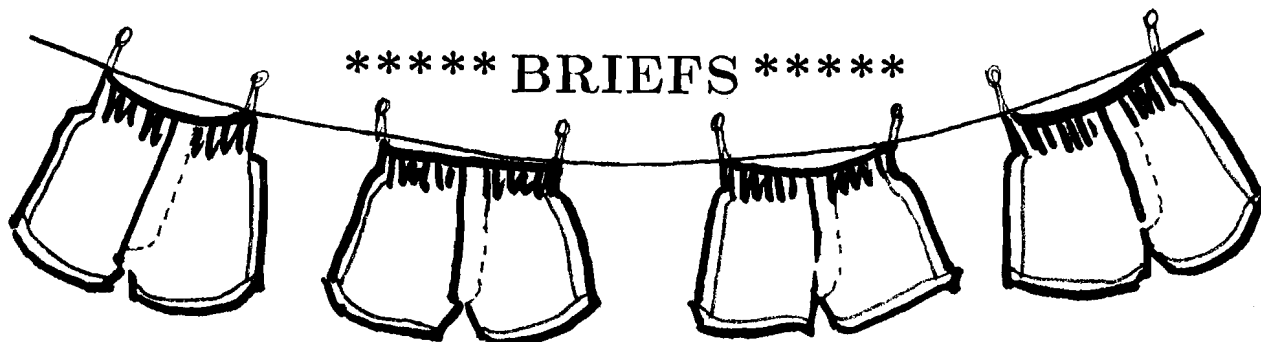
The patch pan, constructed to hook onto the back of a truck, provides an easier method of shoveling cold patch for pothole filling. Rather than reaching high up into the truck bed for the patch, the cold patch is dumped into the pan at about knee level; then one can easily reach in and shovel out what is needed. Not only does the low pan serve to loosen up the patch as it drops down, leaving it soft and malleable, but it also helps prevent back injury.

The construction of the pan is simple. Using 1/8 inch gauge steel and in-house welding equipment and labor, the pan can be fabricated in roughly three hours. Cost is minimal, estimated at not more than \$100. The pan starts as a flat piece of steel, is put into a press to shape an "L", then has two side pieces and a curled up front edge welded onto it. The curled front helps prevent the patch materials from dribbling off when in transit. The back end fits onto the same brackets that are used for the chip-spreader, with two long pins used to fasten it on. It can be attached to most truck types. In terms of longevity, the original unit built in the early 1960's is still in use today. As John Gartska explains "It saves alot of pitching and shoving from way up on the high truck." A final note is that since John came up with his invention, a commercially produced "patch box" or "patch pan" is now on the market. If you have a bright idea, first see your patent lawyer, then call Baystate Roads.

#### Asphalt Paving Box

Another item that originated in John's creative mind is an asphalt paving box. This item, built for next to nothing using found materials in the highway yard, has already been reproduced in the towns of Westhampton and Huntington. The box, attached to the front of a motor grader, was fabricated by John and his crew in the late seventies to spread blacktop in a more controlled and efficient fashion. The problem with the grader was that it was hard to control when used to spread the mix for a straight pavement edge; and

*Paving ..... cont. on p. 5*



CONGRATULATIONS to Richard C. Boutiette, Director of Public Works for the Town of Wakefield, for receiving the FIRST Donald C. Stone Award for Excellence in Education. He was presented with this citation on September 29, 1988 at the American Public Works Association Annual Awards Banquet, APWA International Congress and Equipment Show, Toronto, Ontario.

Sorry, but we found another blooper in the *Inspector's Job Guide for Highway and Street Construction/Road and Highway Maintenance Tables*. On page 13 in the orange portion, showing a conversion factors table, the entry for square feet to square yards should read 0.11, not 0.011.

Win \$10,000! The National Research Council's Strategic Highway Research Program (SHRP) is sponsoring a competition to inspire the development of new devices and techniques to protect maintenance workers on the highways. A grand prize of \$10,000 will be awarded, with \$25,000 in total prizes given.

With over 500 maintenance workers killed each year, and many more injured, there is a need for better highway work zone safety. Maintenance work zone safety is still a relatively undeveloped field and ideas are needed which would be further developed by SHRP. Suggestions for ideas include:

- \* Robotics to replace workers in vulnerable positions
- \* Moveable barriers to protect workers
- \* New tools, materials, and methods to speed up maintenance operations
- \* New types of warning devices for motorists

More information is available from Graham-Migletz Enterprises, Inc., P.O. Box 348, Independence, Missouri 64050.

#### NEW ENGLAND TECHNOLOGY TRANSFER CONFERENCE ON ROADWAY PAVEMENTS

The New England Technology Transfer Centers – Baystate Roads Program, Vermont Local Roads Program, New Hampshire Technology Transfer Center, Maine Technology Transfer Program, Connecticut Technology Transfer Center – and the Rhode Island Dept. of Transportation, MA Dept. of Public Works, CT DOT, FHWA, The Asphalt Institute, and the American Public Works Association are co-sponsoring this

all day event. The Conference will be held on Tuesday, May 16, 1989, at the Andover Sheraton Rolling Green, Andover, MA. Speakers include Peter Howe from the Boston Globe, Robert Joubert from the Asphalt Institute, a representative of the Highway Users Federation, and other distinguished transportation experts.

During the day, the following topics will be covered: how to obtain funding for local highway programs, public relations during periods of roadway (re)construction, the "20-20" program - will the Federal highway program help municipalities at the conclusion of Interstate Construction in 1990?, the relationship between asphalt thickness and pavement performance, managing the utility cut problem, the economics of pavement management, all about geotextiles, compaction equipment that a small town should have, status of the New Hampshire pavement management program, conducting surface distress surveys and alternate treatment selection, local level mapping: CADD, early vs. late season paving, and all about the Army Corps of Engineers Cold Regions Research Lab.

This sounds like a lot to cover in one day, and it is. However, the topics will be offered concurrently, at short sessions. A detailed brochure will be sent out in late March. For further information before then, call Meryl at the Baystate Roads Program.

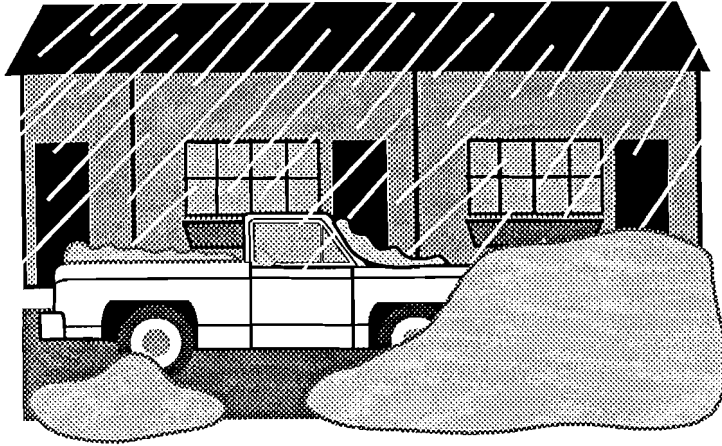
#### NEW ENGLAND TIMBER BRIDGE CONFERENCE

The New England Timber Bridge Conference will be held on June 13-15, 1989, at Lake Morey Inn, in Fairlee, VT. The conference will present current information on the use, design, construction, and maintenance of contemporary timber bridges. The availability, suitability, and treatability of native woods will also be addressed.

The Conference will bring together national and regional experts who will provide information on new technologies, comparative costs, and practical experience. People responsible for the provision and maintenance of bridges, including state and local officials, engineers, and consultants, and those using and developing forest resources and/or potential economic development, should find this conference of interest.

The Conference is being organized by the New England Resource, Conservation and Development Areas (RC&D). For more information, contact: Dennis L. Borchardt, RC&D Coordinator, George D. Aiken RC&D Area, 38 South Main St., Randolph, VT 05060, tel. (802) 728-9526

# PUBLIC RELATIONS IN WINTER



Robert Bartlett, Highway Surveyor for the Town of Hopkinton, MA, makes his job easier by educating the citizens of Hopkinton about winter traveling conditions. He alerts drivers of local snow removal policies, and explains some precautions that individuals should practice during winter. Below is his open letter to the town, listing town bylaws and good sense driving suggestions. He notes that his mailings have been very well received, and that any of the information can be changed to meet local conditions or bylaws. Consider trying his successful approach in your town.

November 1, 1988

To the Citizens of Hopkinton:

The following is an overview of the Highway Department's preparation and plan for the upcoming winter. We have been very busy since late August preparing for winter. This includes plow painting, sand spreader installation, route map review and stocking up on supplies. We hope that all motorists using our streets are also preparing for winter now and not waiting until snow actually falls. We have had heavy snowfall in October, so please begin to prepare your vehicle. The biggest problem the Highway Department faces during a storm is dealing with drivers who have not adequately prepared. I cannot stress this point too strongly. Go over the checklist further in this report.

It is our goal to remove snow and ice from town streets as rapidly and efficiently as possible. Safety and mobility of the community is of paramount importance and many times a herculean effort is needed to reach this goal. I am very fortunate to have the equipment and personnel to do the job. Both full time and part time personnel take pride in clearing our streets and they are dedicated to performing in a professional manner. Each storm is different and presents challenges that can be very difficult to handle. Such things as temperature, time of day, traffic conditions, and the rate of snowfall are just a few factors affecting the impact of a storm in Hopkinton. Total amount of snowfall is, of course, one of those factors. However, depth alone can be a deceptive yardstick. For instance, a small storm during a week day

rush hour can cause havoc, while an equivalent storm on the weekend or late at night may cause little trouble. Light snow and heavy wind will cause continual drifting and ice particles. Heavy wet snow will bring down trees and wires and cause additional equipment strain. Snow turning to rain will cause flooding of roadways. These are just a few problems encountered throughout the winter.

At the end of the season there is nothing to show for this great expenditure, no new streets, no new schools; yet it would be unthinkable not to make every effort to clean our streets as rapidly as possible. We will continue with our reduced salt use on secondary roads begun in 1984. This results in a maximum positive effect on wells and the overall environment. Recent increases in the cost of salt continue to offset the savings of use reduction. Commencement of plow activity, especially on our main roads, will take place sooner than before, as we have found that today's smaller, lighter vehicles do not negotiate well through slush or lighter accumulations.

On the issue of school cancellations, I would remind everyone concerned to listen to TV, radio and the Fire Department for this notice. Do not call Police, Fire or Highway Department phones, as this ties up necessary emergency lines. The decision is made by the school superintendent after he consults with this department. Many factors are taken into account, with the children's safety being foremost, of course. On occasion, we may have most of the town roads plowed, but have not been able to clear the schools. This can be a factor to be considered. Plowing all the schools is an enormous task, and although a private contractor may ensure parking areas are plowed in time for school starting, the cost would be exorbitant versus the Highway Department doing the job. Many people do not know that we are responsible for plowing all schools in addition to our other duties. The one hour delay has worked well in the past and probably will be used more often. Please respect your school superintendent's decision, as it is not an easy one and much is taken into consideration before judgment is made. These are just a few thoughts presented as we prepare for the months ahead. Everyone at the Highway Department hopes you have a safe winter. Please follow our recommendations. Thank you.

Sincerely,

Robert Bartlett  
Highway Supervisor

Highway Superintendent, Robert H. Bartlett wishes to remind all Hopkinton residents of By-Laws pertaining to the parking of motor vehicles during the winter months.

Traffic Rules and Orders, Town of Hopkinton, Article IV, Section 8, 'It shall be unlawful for the driver of any vehicle, other than for an emergency, to park said vehicle on any street between the hours of 1:00 a.m. and 6:00 a.m. from November 15 to April 1.'

Article X, Section 1, By-Laws Town of Hopkinton.

The Highway Surveyor, for the purpose of removing or plowing snow, or removing the ice from any way shall be authorized to remove or cause to be removed to some convenient place, including in such term a public garage, any vehicle interfering with such work. The owner of any vehicle so removed shall be liable for the cost of such removal, and for the storage charges, if any, resulting therefrom. The Highway Surveyor, whenever any vehicle is so removed, shall notify the Police Department and said Department shall render all necessary assistance to the Highway Surveyor in enforcing this By-Law.

Article 3.

No person shall pile, push, throw, shovel, plow or by any other method or means cause snow to be deposited or placed on any public roadway or sidewalk of the Town so as to impede, obstruct or interrupt or otherwise adversely affect the unrestricted flow of traffic or the safe travel of any pedestrian on such roadway or sidewalk. The foregoing sentence shall not apply to any person in the employ of the Town, or in the employ of an independent contractor which has been hired by the Town for the purpose of snow removal. Whoever violates this section shall be liable to a penalty not exceeding twenty-five dollars for each such violation. Each instance of such conduct shall constitute a separate violation of this By-Law. Superintendent Bartlett asks your cooperation regarding these rules and regulations. They will be strictly enforced.

The following are recommendations and information relative to the safe operation of vehicles in snow storms and the winter season operations of the Hopkinton Highway Department.

1. Make certain your vehicle is **READY** for winter driving conditions long before the first storm hits. Being **READY** means good snow tires installed, good wiper blades, properly working defroster, added weight in the trunk, i.e. pails of sand, cement blocks, and a well made ice scraper.
2. Reduce your speed in snow and ice conditions. This is the #1 cause of most accidents. People have actually tried to pass a sander or plow on many occasions. Hopkinton, with its higher elevation, is subject to sudden freezeover conditions and catch many a motorist unaware.



3. At the beginning of each storm the Highway Department employees must also drive icy conditions to reach the equipment needed. This cannot be done quickly. Priorities are set and some areas must wait longer for service than others. 100 miles of roadway over 27 square miles is a very sizeable workload.
4. Do not drive in winter storms unless absolutely necessary. If you do have an emergency that requires you to travel, call us for conditions or assistance.
5. When a storm is forecast please remove vehicles from roadsides. Do not wait until the 1:00 a.m. curfew.
6. Shovelling or plowing snow from driveways into the street is not only illegal, it can be a serious traffic hazard. Shovelling snow to the side of the driveway opposite the direction of the plow will significantly reduce those buildups of snow at the end of the driveway. Before your final driveway cleanup check the street. If the street is plowed clean and full width, you are safe. If not, that dreaded plow will be back to fill you in.
7. Mailboxes installed in the right-of-way are placed at the **OWNER'S RISK**. Get them back as far as practical. If the post is rotted, replace it now so the weight of the snow rolling off the plow will not break it off.
8. Avoid calling the Town garage during storms unless absolutely necessary. We are very busy coping with the storm and our only line must be kept open for emergencies.
9. Snow plow trucks with their plows up does not mean they are not doing their job. They may be heading in for fuel, repairs, or enroute to their designated plowing area.
10. When spring arrives, if your lawn has been damaged at the roadside, please remember that without frost in the ground during some storms this damage can easily result. We will make every effort to make repairs.

GENERAL INFORMATION REGARDING SNOW REMOVAL OPERATIONS:

1. All main roads are treated immediately when they are covered with a thin layer of snow. Salt keeps the snow from bonding to the pavement and allows for cleaner plowing. Plowing begins when two to four inches have accumulated and sooner if traffic conditions are heavy.
2. We are not in competition with surrounding towns to achieve bare pavement. Each town has their own policy. We strive for the safest streets at reasonable costs in the shortest period of time.
3. Highway Department workers do not get a shift change. If a storm is of long duration the workers continue around the clock until the job is done.
4. The growth of the town has added nearly 30 more miles of roadway in just a few years. The cost for a mild to moderate winter is \$150,000.00 and one major storm could cost as much as \$50,000.00. 25 pieces of equipment are used to clear Hopkinton streets every snow storm.

5. Each major snow storm we receive assistance from the Fire Department, Police Department, School Department, Cemetary Department and Water Department, to name a few. They assist in all areas from answering phone calls to operating heavy equipment. All equipment is equipped with two way radios and these employees can communicate directly with the Police and Fire Stations when an emergency occurs, as well as the Highway Department Superintendent, Foreman and Assistant Foreman.

I hope this information is helpful and will make winter a little easier to bear. I can't wait until the Marathon!

Robert H. Bartlett  
Highway Surveyor"



### Paving (cont.)

alot of material was being lost off the sides of the road. The paving box disposes material only where it is needed; i.e if the road is perfect, no material at all is deposited.

The unit is intended for gravel penetration, low volume roads where the edges have sagged off or where rutting occurs in the wheel tracks. The box is used prior to sealing the road to correct bad spots. As with other types of paving jobs, the primary season for this work is the summer months into September and early October. The paving box can be constructed in roughly two days time.

Using scrap materials from the yard, two I-beams from an old bridge were used on the fifteen foot long sides. The front and back are just under eight feet wide. The front is cut slightly at an angle so it will slide along without digging into the dirt. A cross piece is used for corner bracing. The back end has a pusher from an old snow plow blade and a center pivot, and is hooked onto the same mount as the snow plow blade. The strike off blade in the back is adjustable by using turnbuckles (John found some old ones in the yard) that will raise the blade by up to two inches.

One side of the box follows along the edge of the road while the high side blade is tight to the surface. This prevents a ridge from forming as the box is moved along. The ruts made by traffic are filled in, along with any rough spots or washboarding. A brush is mounted on the back high side (John used a section of a gutter broom from an old sweeper mounted on an old snow plow part used to mount roller wheels - this allows it to be moved up and down) to smooth the edge in preparation for a roller pass. By preventing the creation of a ridge, when the road is sealed the new section blends right in to the existing pavement.

Approximately half way back on the I-beams, a piece of ten inch planking has been affixed to hold excess material. This works well for preventing loss of material over the top. John has found that a half truck load from a twelve ton truck, five to six ton of hot mix, carries along quite a far distance. The overall mix thickness varies according to the type of job. For example, the decision to use half inch or two inch thick material will depend on the grade and density of the mix. John never used anything heavier than "regular top" with shimming because thicker applications made it difficult to blend the edges onto the base course.

Cables are hooked half way up the sides onto the same mount used to raise a snow plow in order to raise the box when it is not in use. This allows travel to the work site without interference. The pushers on the very back have a center pivot to allow the box to move freely. As a safety precaution, orange flags are mounted on the two front corners whenever the paving box is on the road.

John demonstrates that virtue that New Englanders are famous for -- Yankee Ingenuity. If you have any great inventions, share them with your counterparts. Call or write



John Garstka explains his innovative paving box

Meryl Mandell at the Baystate Roads Program, (413) 545-2604, so she can write a story about your Yankee Ingenuity. You can also call to get more details about the inventions described above.

# THE WORD ON THE STREET



by  
**Anthony J. Buccitelli**

Deputy Chief Counsel, MDPW

In order for a contractor to bid or to be awarded by a municipality a "Chapter 90" project (i.e., a project funded pursuant to Mass. Gen. Law

## PREQUALIFICATION OF CONTRACTORS FOR CHAPTER 90 PROJECTS

Ch. 90 Sec. 34), it must be prequalified by the Massachusetts Department of Public Works (MDPW). According to Mass. Gen. Law Ch. 29, Sec. 8B, the MDPW "shall require" any contractor who proposes to bid on or to be awarded any contract for a "Chapter 90" project to be prequalified.

In order to become prequalified, a contractor must submit a Prequalification Application to the MDPW in accordance with Mass. Gen. Law Ch. 29, Sec. 8B and 720 Code of Massachusetts Regulations Sec. 5.01 et. seq. When the completed application is received by the MDPW, it is acted upon by the Department's Prequalification Committee which determines the size and type of projects the

applicant is qualified to perform and assigns to it a corresponding Prequalification Rating.

Once the contractor has received the Prequalification Rating, it may bid on and be awarded any project for which its rating qualifies it. These *Prequalification Ratings* are reviewed annually, or more frequently at the request of the MDPW, the municipality, or the contractor. Decisions of the Prequalification Committee are subject to certain appeal procedures.

As noted, all contractors who propose to bid on or to be awarded "Chapter 90" projects must be prequalified. Subcontractors, including materialmen, however, need not be prequalified.

## LEGAL LINGO:

### A BASIC GUIDE

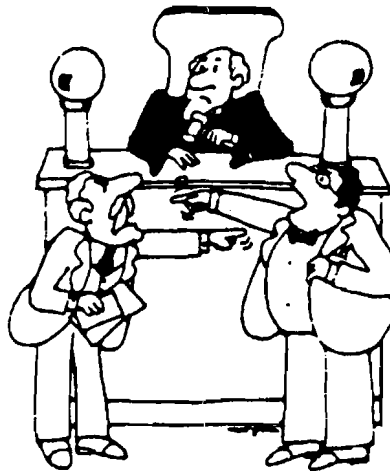
You never know when you might need to know the definitions of the following terms. Lets hope you never do, but just in case, read on...

**AFFIDAVIT** – a voluntary, written statement made by an individual, which is sworn to or affirmed before a witness or a notary public. A person who makes an affidavit is called an affiant.

**COMPLAINT** – a form of legal process which usually consists of a formal allegation or charge against a party, which is made or presented to the appropriate court or officer, for a crime that has allegedly been committed or a wrong that has allegedly been done.

**"DEEP POCKETS" THEORY** – describes the condition in which lawyers will involve potential defendants, if the defendants have the available financial resources. It also relates to the enforcement of judgments in the apportioning of awards under joint and several liability.

**DEFENDANT** – the named entity which is being sued for having allegedly committed a wrongful act. A defendant may be an individual, a municipal corporation, or any other legal entity.



**DEPOSITION** – an affidavit, oath, or written testimony of a party or witness, given in the course of a judicial proceeding in response to written or oral questions, where there has been an opportunity for cross-examination. An individual who makes a deposition is called a deponent.

**JOINT AND SEVERAL LIABILITY** – when it has been determined in a legal action that two or more wrongdoers have jointly caused injury or damage to the plaintiff, the plaintiff may seek enforcement of the judgment against all of the defendants, or any one of the defendants. The term thus means that each wrongdoer can be considered to be liable individually or together.

**JUDGMENT** – the sentence of the law, for the record, as the facts are applied to the law in the particular case; the ruling of the court and the final set of the proceeding.

**PLAINTIFF** – the person who brings an action, suit or complaint; the one who complains of an injury having been done. The plaintiff may be a person, a corporation, or any other legal entity.

**RELEASE** – the giving up or abandonment of a claim or right to the person against whom the claim exists, or the right to be enforced or exercised.

**SUMMONS** – a document issued to or served upon a defendant in a civil action, for the purpose of securing his appearance in the court action. The summons usually notifies the defendant that if he should fail to appear within the specified time, a judgment by default will be entered against him.

**TORT** – an injury or civil wrong, committed with or without force, to the person or property of another. It is a wrong that has been done to the plaintiff, and is actionable in court.

**TORTFEASER** – a person who commits a tort or is a wrongdoer.

(from Spring 1988, Tech Trans, Georgia Tech)

# The Law on Repairs by Towns to Private Roads



*Attorney Leonard Kopelman*

Municipalities are often asked to make repairs to roads that have not been formally accepted as public ways. Subdivision law applies here, as does a number of personal and property injury liability issues. Temporary repairs to private ways are governed by MGL c. 40, sec. 6, which states that:

"Cities and towns may by ordinance or by-law provide for making temporary repairs on private ways. Such ordinance or by-law shall determine

(a) the type and extent of repairs; (b) if drainage shall be included; (c) if the repairs are required by public necessity; (d) the number of percentage of abutters who must petition for such repairs; (e) if betterment charges shall be assessed; (f) the liability limit of the city or town on account of damages caused by such repairs; (g) if the ways shall have been opened to public use for a term of years; and (h) if a cash deposit shall be required for said repairs."

Liability issues are governed by MGL c. 84, secs. 23, 24, and 25. These laws tend to restrict the liability of a municipality unless a road can be shown to be "opened and dedicated to the public use." Even so, the town is not liable for an injury caused to a person by defect on that way if the way has been posted with a conspicuous and legible notice upon entry to the way that it is private and dangerous. However, the town's liability status changes if the town has made repairs to the way within six years of the plaintiff's injury; in that case, the municipality is bound to keep the way in repair. In the words of Atty. Kopelman:

"Should a town decide to make repairs to a private way, after complying with the terms of MGL c.40, sec. 6N, it would be advisable to post warnings at the beginning of such ways and to obtain not only agreements from abutters to indemnify and hold the Town harmless from personal and property injury resulting from any defects in such ways, but also to obtain an affirmative agreement that these abutters will provide for the future maintenance and repairs of these ways."

Individuals with frontage on private ways have sometimes attempted to gain exemption from the Subdivision Control Law, which permits an "approval-not-required" endorsement of a plan. However, Attorney Kopelman's firm has found that before an applicant can gain the said approval, they must establish both public maintenance and public use before the subdivision road can be exempted.

NOTE: The above summary is based on a longer memorandum prepared by Attorney Leonard Kopelman, of the Boston law firm of Kopelman and Paige. For a copy of the complete memorandum, write or call the Baystate Roads Program (413) 545-2604.

## Briefs (cont.)

The University of Connecticut's Transportation Institute, Connecticut's T2 Center, is developing a Local Road Superintendent's Handbook on Supervisory Practices under a grant from the Federal Highway Administration.

The Handbook is being designed as an easy to use resource on basic supervision for first-line road supervisors. It will emphasize common sense successful approaches to the basic human relations situations encountered by the first-line road supervisor.

To make the handbook a practical and effective resource, the authors need real life examples of human relations experienced by first-line supervisors and how they resolved those situations. Possible situations could relate to:

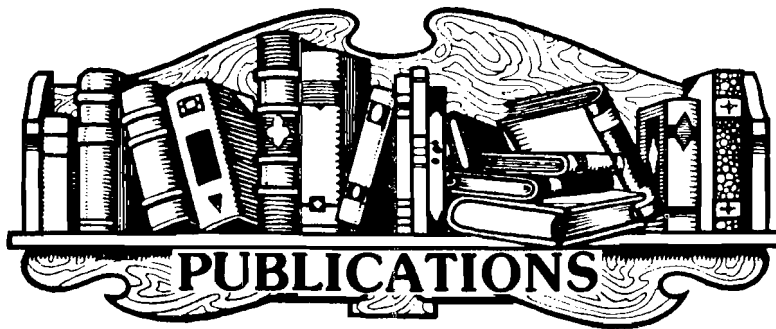
employee use of drugs and alcohol, discrimination, employee complaints and discipline, employee performance evaluation, employee motivation, handling public complaints, improving productivity, relationship with unions, how to hire good employees, etc.

Local Road Superintendents and Supervisors who would like to assist in the development of this handbook by sharing some of their most memorable human relations experiences as a supervisor should contact:

Donald W. Huffmire  
School of Business Administration  
Box U-41B  
University of Connecticut  
Storrs, CT 06269-2041  
Tel. 203-486-4309.







Unless indicated, these reports are available to public agencies at no cost, while supplies last, from the Baystate Roads Program. There is a small fee for private agency requests. Reports listed in previous issues of "Mass Interchange" are available while supplies last. To obtain a copy, indicate your choice(s) in a letter to the Program, or call Meryl Ann Mandell at (413) 545-2604.

## New Listings

- "Roads that Last," General Chemical Corporation (10 pages - 1988). This brochure discusses the advantages of calcium chloride use for controlling maintenance costs on unpaved roads. Topics covered include stabilizing unpaved roads, strategies for calcium chloride application, and maintaining roads that last.
- "Traffic Detector Handbook," U.S. Dept. of Transp., FHWA (318 pages - 1985). This document presents the best current practices for the installation and maintenance of three types of traffic detectors. These detectors include the inductive loop detector, the magnetometer and the magnetic detector. Included are innovative installation techniques for all three types of detectors. This handbook is accompanied by a field manual, implementation package.
- "Safety Restoration During Snow Removal - Guidelines," J. Migletz, et al., Graham-Migletz Enterprise, Inc., for FHWA (95 pages - 1987). A procedure for developing post-snowstorm cleanup priorities is presented. The report ranks 17 snow-related safety hazards, including superelevated and sharp curves, bridge parapets, rails, and curved areas, plows and other snow removal equipment, and others. Remedies to the hazards identified were limited to practices, procedures, equipment, and personpower resources available to State highway agencies.
- "Glulam Bridge Systems," The American Institute of Timber Construction (33 pages - 1988). This manual provides typical design data and recommendations for the use of preservative-treated glulam timber in the construction of vehicular bridges. It addresses two types of bridges: glued laminated stringer bridges with transverse glued laminated panel decks (member sizes tabulated for 20 - 80 feet), and longitudinal deck bridges (member sizes tabulated for spans from 6 - 31 feet).
- "Asphalt Seal Coats," by Coleman P. Wyckoff, Washington State Dept. of Transp. (35 pages - 1987). This manual, based on field experience, contains the reasons for asphalt seal coating. It discusses each type of seal coat, the purpose of the seal, and how it is constructed. Emphasis is given to chip seals and the factors critical to obtaining consistently good seal coats.
- "Retention, Detention, and Overland Flow for Pollutant Removal from Highway Stormwater Runoff: Interim Guidelines for Management Measures," U.S. Dept. of Transp., FHWA (200 pages - 1988). This report provides interim guidelines for the design of management measures for the removal of pollutants from highway stormwater runoff, in accordance with the objectives of the Clean Water Act.
- "Techniques for Reducing Construction and Maintenance Costs: Value Engineering for Municipal Highway Agencies," U.S. Dept. of Transp., FHWA (218 pages - 1987). This is a seminar notebook, covering shoulder maintenance and roadway drainage rehabilitation. It includes an introduction to the concepts of value engineering and a detailed description of two case studies.
- "Traffic Mitigation and Demand Management, Summary of National Experience and Potential Applications in New York," Port Authority of New York and New Jersey (25 pages - 1987). This report summarizes the set of urban transportation innovations termed traffic mitigation, which involves the private sector's assistance in public-sponsored traffic reduction programs.
- "How to Manage Traffic During Highway Reconstruction," New York State Dept. of Trans. (91 pages - 1985). This users manual provides guidance for preparing traffic management planning efforts, including: HOV actions, bus transit, park and ride lots, vanpooling, commuter rail, ferry service, alternate routes, and public information.
- "Speed Control through Work Zones: Techniques, Evaluation, and Implementation Guidelines," U.S. Dept. of Trans. (46 pages - 1987). A discussion of four techniques for improving the effectiveness of speed zoning in construction areas on multi-lane freeways is presented.
- "Accessibility for Elderly and Handicapped Pedestrians - A Manual for Cities," U.S. Dept. of Trans. (200 pages - 1987). This manual provides guidance for planners to follow in developing an accessibility program, along with the details required to execute such a program.



# CALENDAR

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

January 31-February 1  
Maintenance Management Systems  
February 1-2  
Equipment Management Systems  
Two - 1-1/2 day workshops  
Newton, MA  
Baystate Roads Program  
Contact: Meryl Ann Mandell  
(413) 545-2604  
Call for enrollment form  
(size limit of 30)

January 31 & February 7  
Mass. Assn. of Conservation Districts  
Urban Hydrology Workshop  
Spencer Country Inn  
Spencer, MA  
Contact: Rita Kaplan  
(413) 443-2820

February 9  
Winter Meeting  
Massachusetts Highway Association  
Lantana Restaurant  
Randolf, MA  
Contact: Harry Loftus  
(508) 485-1973

February 11  
NEITE  
Annual Dinner Dance  
Mystic, CT  
Contact: Barbara Splitstone  
(203) 566-8827

March 6-7  
APWA Education Foundation  
Emergency Managt. in Public Works  
Boston, MA  
Contact: APWA

March 7, 8 & 9  
Personnel/Labor Relations Workshop  
Westboro, Dedham, Amherst  
Baystate Roads Program  
Contact: Meryl Ann Mandell  
Note: Brochure on p. 11

March 13-15  
ATSSA  
Traffic Expo '89  
Wyndham Hotel and Convention Center  
Palm Springs, CA  
Contact: Caroline Carver  
(800) 272-8772

April 10-12  
New England Chapter APWA  
North American Snow Conference  
Hartford, CT  
Contact: S. Robert Pryzby  
(203) 659-2711

May 4  
Massachusetts Highway Association  
Spring Meeting  
Wachusett Country Club  
West Boylston, MA  
Contact: Harry Loftus

May 18  
New England Technology Transfer  
Conference on Roadway Pavements  
Sheraton Sturbridge, MA  
Contact: Meryl Ann Mandell  
Note: Watch for a brochure

June 13, 14 & 15  
New England/New York Timber  
Bridge Conference  
Lake Morey Inn  
Fairlee, VT  
Contact: RC&D/USSCS  
(802) 728-9526

Mid-June  
Demonstration Installation of  
Geotextile Fabric during Regravelling  
Shutesbury, MA  
Contact: Meryl Ann Mandell  
(413) 545-2604

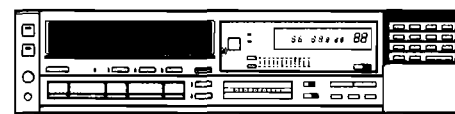
## Videotape Lending Library

### New Acquisitions

The videotapes listed below have been added to our Video Lending Library holdings. To borrow a copy, or obtain a complete listing of our holdings, send a note or call the BRP with your request. A Borrower's Registration Card must be on file before a tape can be borrowed.

PA-113 Drainage Workshop  
(260 min.) - from recent BRP workshop \* \* Course handouts are still available.

PA-114 Boston's Big Dig &  
Harbor Clean Up (180 min.) -  
WGBH Channel 2  
PA-115 The Central Artery/Third  
Harbor Tunnel (9 min) - Medi-  
awrights  
PA-116 Mediation "Negotiating  
Settlements" (45 min) - Guffanti  
PA-117 Special Needs (22 min.)  
MBTA Stress Management &  
Passenger Relations (29 min.) -  
MBTA



PA-118 Riding Together (14 min.)  
If Looks Could Kill (28 min.)  
Employee/Passenger Relations  
(16 min.) Surveying the Road (6  
min.) Intersections (7 min.) How  
Would You Handle Them (8 min.)  
- MBTA  
ST-120 Sharing the Road (15  
min.) - FHWA, Office of Motor  
Carrier Safety  
ST-121 Sign Management (16  
min.) - ATSSA  
ST-122 Nighttime Traffic Control  
(18 min.) - ATSSA

# Index of MASS INTERCHANGE

## Winter 1988 - Winter 1989

Below is a listing of this year's currently published articles. The issue date follows the article title, and can be obtained, while copies last, by calling the Program (413-545-2604).

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- Wanted: Retired Engineers and Public Works Officials FW8788
- Commissioner Designate Garvey Reports on Bond Bill FW8788
- Videotape Library Established FW8788
- Baystate Roads Program Offers Pavement Management Workshop SS88
- Report of the Transportation 2020 Consensus Hearings SS88
- Advisory Committee Meets F88

### Budget Related

- Flood Disaster Assistance Funding FW8788
- Do Your Homework Before Bidding that Project SS88

### Helpful Hints

- Tips from the Field FW8788
- Ten Commandments for Good Roads FW8788
- Free Guard Rails F88

### Liability

- The Word on the Street, The Law on State Curb Cut Permits F88
- The Law on Repairs by Towns to Private Roads W89
- Legal Lingo-A Basic Guide W89

### Massachusetts Articles

#### Vision 2020 FW8788

- The Word on the Street, New Massachusetts Scenic Vista Preservation Program SS88
- Salamander Saviors Successful SS88
- MAPC Sponsors "The Commute" Forum for Local Officials W89

### Pavement Maintenance

- Why Use a Minimum 4" Pavement Thickness Design? FW8788

- Pavement Management Workshop for Regional Planners FW88
- Geotextiles SS88-Maintenance Management System and Equipment Management System Workshop F88
- "Patch Pan" and "Asphalt Paving Box" Save Time, Effort, and Money W89

### Safety

- Health and Heart Attacks, Are You at Risk? SS88
- The "Highwayman" F88

### Winter Maintenance

- Winter Road Maintenance, Snow Planning vs. Chaos FW8788
- Progressive Salting/Sanding Policies Established in Wellesley F88
- Private Weather Forecasting for Winter Highway Maintenance F88
- Public Relations in Winter W89



**PRESS RELEASE** MAPC Sponsors "The Commute" Forum for Local Officials

(Boston, MA)— To help cities and towns get the upper hand on traffic, the Metropolitan Area Planning Council (MAPC) will hold a forum titled "The Commute" on Wednesday, February 1 at the Park Plaza Hotel, Boston. The forum is primarily designed for local officials, who play a key role in making land use and development decisions that are crucial to the region's future mobility.

A recent study of metropolitan Boston traffic indicates that if current trends continue, traffic growth in the metropolitan region will be twice the national average. If these projections are correct, mobility and access will depend upon all of us changing the way we do business.

Backed by current statistics and traffic projections for the future, the program will identify workable options for improving commuting traffic in the Boston region.

**PRESS RELEASE** Contact: Ethel Shepard, John Noorjani, or Carol Blair (617) 451-2770

"Participants will leave the conference with practical information, professional contacts and greater awareness of available strategies to keep traffic moving in the future," said Carol Blair, MAPC Transportation Group Manager.

Topics to be presented are: Building to eliminate bottlenecks and increasing the capacity of existing facilities; parking and trip management; transportation centers and innovative transit; and development and land use planning. Local officials who have successfully implemented traffic reduction programs will be on hand to identify techniques and examples where local government, business and developer partnerships have worked successfully to reduce traffic problems.

If you would like to receive more information and "The Commute" forum brochure, call the contacts noted above at (617) 451-2770.



# WORKSHOP ON PERSONNEL/LABOR RELATIONS



March

## WORKSHOP SPEAKERS

## DIRECTIONS

- 7th: Central New England College  
Westboro, MA  
8th: Holiday Inn  
Dedham, MA  
9th: University of Massachusetts  
Amherst, MA

*Sponsored by*

**The Baystate Roads Program**

at

**The University of Massachusetts**

*in cooperation with*

**The Federal Highway Administration  
The MA Department of Public Works**

## WORKSHOP AGENDA

- 8:30 Registration  
9:00 Introduction  
9:10 Employee:  
- Training  
- Motivating  
- Rewarding/Disciplining  
10:45 BREAK  
11:00 Safety on the Job  
12:00 LUNCH  
1:00 Communicating with:  
- Employees  
- Town Boards  
- The Public  
- The Media  
2:00 BREAK  
2:15 Unionization  
3:15 Evaluation  
3:30 CLOSING

**Stephen L. Delaney** is an Associate Director of the Massachusetts Municipal Association (MMA) Consulting Group, and has been principal consultant for numerous MMA studies. He has over thirteen years of public management experience, serving in the Town of Danvers as Director of Operations for the Department of Public Works, and as Assistant Town Manager. He oversaw the personnel function, including contract administration, recruitment, selection, wages, salaries, and grievances.

**Jeffrey Siena** is a Loss Control Manager for the MA Interlocal Insurance Association (MIIA), a service of the MMA. MIIA is a non-profit insurance pool which currently serves over 200 MA communities. Their goal is to reduce the frequency and cost of accidents to municipalities. Mr. Siena, with over fifteen years in the insurance industry, teaches job safety to municipalities.

**Harvey L. Friedman, J.D.**, is the Director of The Labor Center and a Professor of Political Science at the Univ. of MA at Amherst. He specializes in unionization, arbitration, and mediation in both the public and private sectors. His expertise and association with these issues dates back forty years.

## WHO SHOULD ATTEND

**The general nature of the workshop topics should appeal to both highway/public works personnel and municipal officials. Emphasis will be on providing a safe work environment, and improving communications.**

### Central New England College

*From Rte. 9E:* Take the Flanders Road exit. Turn left at ramp end, then immediate right into GTE Sylvania driveway. Follow road to top, building with flags is Central New England College.

*From Rte. 9W:* Take Flanders Road, left at ramp, left again towards GTE, right into GTE driveway, then as above.

*From Rte. 495N:* Take Rte. 9W exit. On Rte. 9, take Flanders Road exit. Follow Rte. 9W directions.

*From Route 495S:* Take Rte. 9W and directions above.

*From Mass Pike Rte. 90W:* Take either Rte. 9 or Rte. 495 and directions above.

*From Mass Pike Rte. 90E:* Take either Rte. 9 or Rte. 495 and directions above.

### Holiday Inn - Dedham

*From Rte. 128:* Take Rte. 128 to Exit 15A (Rte. 1 Dedham). Holiday Inn is within view of exit ramp.

### University of Massachusetts at Amherst

*From N:* Take Rte. 91S to Exit 25, turn left, then right at intersection (Rtes. 5 & 10S). In one mile turn left (Rte. 116S), go 8 miles to UMass exit, take left at ramp end (Massachusetts Ave.), and left at second light. Follow signs to Campus Parking Garage.

*From S:* Take Rte. 91N to Exit 19, turn right onto Rte. 9E for 4.5 miles. Take Rte. 116N (traffic light) for 1 mile to UMass exit, right off ramp (Massachusetts Ave.), left at second light & signs to Garage.

*From E:* From Mass Pike (I-90W), take Exit 4 (I-91N W. Springfield/Holyoke) towards Holyoke (I-91N), then directions from S.

*From W:* From Mass. Pike (I-90E), take Exit 4 (I-91N towards Holyoke), then directions from S.

**Parking Validations:** \$1.50 per day. Available for purchase at conference registration desk.

DETACH & MAIL

### Enrollment Form

Name \_\_\_\_\_  
Title \_\_\_\_\_  
Agency \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ Zip \_\_\_\_\_  
Telephone \_\_\_\_\_

### Meeting Location

- March 7 Central New England College
- March 8 Holiday Inn
- March 9 University of Massachusetts

### CIRCLE ONE

**Registration Fee: \$20.00**

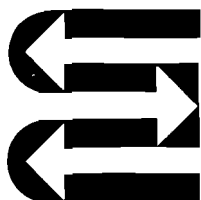
Make checks payable to:

University of Massachusetts

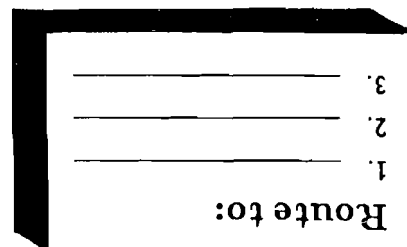
### Return this form directly to:

**MERYL ANN MANDELL  
BAYSTATE ROADS PROGRAM  
MARSTON HALL 214F  
DEPARTMENT OF CIVIL ENGINEERING  
UNIVERSITY OF MASSACHUSETTS  
AMHERST, MA 01003  
TEL: (413) 545-2604**

Workshop fees are due by February 22nd (If a check can not be issued by the 22nd, call by the 22nd to reserve a space. Checks and cash are acceptable payments; we do not handle purchase orders.) Lunch and course materials are included.



Massachusetts Department of Public Works  
Federal Highway Administration  
University of Massachusetts/Amherst



Baystate Roads Program  
Dept. of Civil Engineering  
University of Massachusetts  
Marston Hall 214F  
Amherst, MA 01003

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Road Repair

The Baystate Roads Program (BRP), which publishes *Mass Interchange* each quarter, is a Technology Transfer (T<sup>2</sup>) Center created under the Federal Highway Administration's (FHWA) Rural Technical Assistance Program (RTAP). FHWA is joined by the Massachusetts Department of Public Works, the Department of Civil Engineering at the University of Massachusetts at Amherst, and local public works departments in an effort to share and apply the best in transportation technologies.

In addition to publishing *Mass Interchange*, the BRP facilitates information exchange by conducting workshops, providing publications and videotapes on request, and offering one-to-one technical assistance on specific roadway issues. Because the program relies on input from many sources, inquiries, articles and ideas are encouraged.

To contact the BRP to receive future copies of the newsletter at no cost, or to submit ideas or articles to *Mass Interchange*, call Meryl Ann Mandell at (413) 545-2604.