MASS INTERCHANGE

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ADVANCED BIOFUELS BILL ENACTED

Governor Deval Patrick signed legislation on July 28 making Massachusetts the first state in the nation to exempt cellulosic ethanol from state gasoline taxes. The bill also requires diesel fuel and oil heat distributors to start adding biodiesel or renewable diesel to their fuel blends in 2010. This legislation exempts cellulosic ethanol from the state's gasoline excise tax based on the percentage of renewable fuel used. For example, the gas tax for a blend of E10 (10 percent cellulosic ethanol/90 percent petroleum) would be reduced by about 2.3 cents.

Last November House Speaker Salvatore F. DiMasi, Governor Deval Patrick, Senate President Murray and Congressman Delahunt unveiled a legislative package to accelerate the emerging advanced biofuels industry in Massachusetts. The Commonwealth is home to a cluster of cellulosic ethanol companies that are members of the Northeast Biofuels Collaborative, some of which are world leaders in the development of advanced biofuels. According to Brooke Coleman, Executive Director of the New Fuels Alliance, this legislation will encourage further investment in these and other technologies and make Massachusetts one of the national leaders in the commercialization of advanced biofuels. "We are uniquely positioned in Massachusetts to draw upon our financial and intellectual capital to move us beyond petroleum," Coleman said. "This bill will provide biofuel producers, researchers and investors with a critical degree of market certainty that will alleviate some of the risk inherent in a petroleum-dominated fuel sector." "With all-time high crude oil prices, this solidifies our position as a leading producer of fuel alternatives and firmly sets Massachusetts on the transitional course from fossil fuels to clean-energy products," said Senate President Therese Murray.

Significant environmental and consumer protection safeguards were built into the legislation. For example, all qualifying fuels must achieve at least a 50 percent reduction of lifecycle greenhouse gas emissions (GHG) over petroleum. Moreover, all fuels will be required to undergo a full life cycle analysis, which includes "significant indirect emissions" and land use changes. The legislation also allows state regulators to delay or scale back the blending requirement if issues arise with supply or cost.

The Clean Energy Biofuels Act also transitions the gasoline tax exemption and the biodiesel blending requirement into a Low Carbon Fuel Standard (LCFS), should such a system be adopted in Massachusetts or by the federal government. Additionally, Chapter 206 of the Acts of 2008 establishes a joint legislative commission to study the feasibility of production tax credits for advanced biofuel producers or farmers who grow sustainable feedstocks.

Sources:

Press Release from Massachusetts Congressman Bill Delahunt, July 10, 2008

Press Release from Northeast Biofuels Collaborative, July 28, 2008

PLAN AHEAD TO REDUCE WORK ZONE IMPACTS

Illustration of a poorly implemented TTC lacking a detour or road closed sign.

Purposeful planning makes work zones safer and construction projects run smoother for everyone. Work-zone planning and implementation need to keep pace with the complexity and infrastructure demands of today's projects -- a surplus of essential repairs or replacements combined with greater traffic volume and density. Efforts that minimize disruptions help with the public's acceptance of street and road projects.

Key to a successful policy are the guidelines for developing a Temporary Traffic Control Plan (TTC). Recommendations for achieving this are documentation of work being done, expected impact on traffic, communication with stakeholders and mitigation of negative outcomes. When agencies put thought into these aspects of a project early, they become part of the budget process so safety and reasonable access do not get short-changed. Assessing specific work-zone impacts this way and incorporating costs to manage them effectively is a useful model for many local projects.

Traffic-control mitigation strategies identified in TTC guidelines vary based on project type. Factors like project length, location, timing, lanes affected, speeds, lane or roadway closures, and the effect on critical services help define the four types:

TYPE 1

Projects with little or no impact due to short duration or likelihood of working off-peak hours or in low traffic areas. ***Examples:*** Traffic signal and sign maintenance work, pavement marking, mowing, patching, surveying or guardrail installation.

TYPE 2

Projects include lane/road closures on busier roadways involving work that cause minimal delays. ***Examples:*** Road resurfacing, bridge deck overlays, and some reconstruction and intersection improvements with minimal impact.

TYPE 3

Higher-profile projects that affect more road users for longer periods, involve delays and/or detours that require temporary improvements, and traffic signal installations. ***Examples:*** Pavement replacement or reconditioning, bridge deck replacement, urban street or intersection reconstruction with unusual access needs, freeway lane/ramp improvements.

TYPE 4

Megaprojects with traffic and mobility impacts that cross municipal and regional lines and affect many stakeholders inside a wide transportation network. ***Examples:*** Interstate rehabilitation projects and major bridge reconstruction/replacement tasks.

Most local road projects fall into the first two categories but it helps to know how work-zone planning evolves as project complexity grows. Developing a detailed plan means more implementation time for each project, more coordination and more scheduling plus an expectation for better decision making.

References:

Manual on Uniform Traffic Control Devices, Chapter 6, Federal Highway Administration, Washington, 2003.

MassHighway Project Development and Design Guidebook, Chapter 17, Massachusetts Highway Department, Boston, January 2006.

VEGETATION MANAGEMENT DOESN'T END IN WINTER WEATHER

Winter weather means you can finally stop worrying about vegetation control and focus municipal efforts on snow removal and winter maintenance. ***Right? Wrong!***

Inspection Suggestions

What colder temperatures do mean is that, in addition to snow removal and winter maintenance tasks, you should now shift your vegetation control activities to inspection, risk management, equipment checks, land clearing, mowing, cleanup, and even some winter spraying. Early winter is an excellent time to assess vegetation areas and determine the strengths and weaknesses of the past year's management program. First determine the criteria for judging the health and appearance of vegetation. You may want to set specific standards and compare them to what you wanted to accomplish in the past year. For example:

- **Safety.** Did you eliminate all sight distance issues and low overhanging vegetation?
- **Appearance.** Has your vegetation program resulted in good roadside appearance? Is dead vegetation piled away from roadways to minimize the danger of fires and any hindrance to winter operations and drainage?
- **Weeds.** What is the ration of weeds to desirable vegetation? Have new plant species taken root in your rights-of-ways?
- **Mowing.** Has vegetation been cut to proper height to maintain optimal plant health? Or has it been scalped, generally mowed too short, or allowed to grow too tall? Have sharp mower blades minimized torn and tattered vegetation?
- **Soil.** Have you tested soil to determine if specific nutrients or amendments are needed to improve the growing conditions?

Planning for Improvement

Following inspection and evaluations, municipalities should start scheduling actions for improving their vegetation control programs. If a total renovation is needed, consider having workers spray this winter with a nonselective herbicide to kill existing weeds. Remember that municipalities are required to use certified sprayers. If you are planning on seeding, keep in mind that seeding in fall rather than spring reaps more success because the soil is warmer, the evenings are cooler, and there is more moisture so that seeds germinate more quickly. Also, since many annual weeds die with the first frost, seeds face less competition for nutrients, sunlight, and moisture. Check the calendar before seeding to make sure tht it is not too late in the season. A good rule is to seed 45 days before the average date of the first frost. If you're looking for an early "green up" next spring, then consider applying an early winter fertilization.

When implementing selective weed control, try to schedule it for those times when the weeds are growing. If this step occurs too late in the winter and plants are hardened, the control will be ineffective.

Personnel Issues

Use the down time in winter, when demanding summer workloads and leaf collection duties are completed, to evaluate staff and staffing needs. Municipalities should encourage employees to set goals for personal and professional growth. This is a good time for them to sign up for a Baystate Roads training class.

Equipment and Supply Checks

Workers should inspect and repair equipment including mowers, tractors, booms, spreaders, sprayers, aerators, seeders, and even irrigation systems. Early winter months allow time for repairing equipment or researching new purchases. Also use this time to clean up old or stored chemicals. When handling, applying, and storing pesticides, always abide by these four words: Always Read the Label. Massachusetts regulates pesticides under the authority of the Massachusetts Pesticide Control Act (MGL 132B) and the Department of Agricultural Resources at 617-626-1700.

BLACKTOP COOKIES

FOR IMMEDIATE CONSUMPTION

Commissioner Bruce Collingwood and his staff in Pittsfield are always striving to increase efficiency, decrease liability and lower operating costs. This is especially true during tough economic times. They have created a recipe (which they would like to share) for making blacktop cookies (chunks) that are easily handled and stockpiled for use during the winter season when potholes develop.

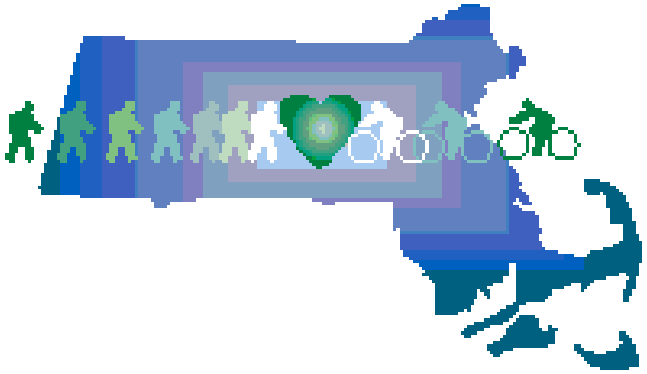
The recipe consists of hot asphalt, spread liberally on the ground and formed into 25 lb wafers. The 350 degree blacktop is allowed to cool overnight. It is then gathered together and stockpiled where it can later be loaded into a hot asphalt box either manually or by using a small loader.

A timer starts preheating the wafers at 2:00 a.m. making them ready to use by 7:30 a.m. When the highway team arrives for work there is no waiting around for these cookies to bake! Up to four tons of hot asphalt can be ready and waiting for the crew. The new four ton, hot asphalt box is trailer mounted and shown at the right.

In the morning the wafers will have melted back into loose hot blacktop that can be pressed into potholes and compacted down to make a permanent repair. The cost of the patching material is nominal compared to the cost of labor and time involved in revisiting the same potholes throughout the winter season. Prior use of a combo hot box and asphalt heater that burned LP gas instead of diesel fuel, did not work well. That process resulted in overheating the product and burning out oils which resulted in the unraveling of the patch from traffic.

For more information, please contact Tom Foody, Pittsfield DPW, at 413-499-9314.

MOVING TOGETHER 2008
October 14
Wrap Up



Wendy Stern, EOTPW Undersecretary for Planning and Programs, welcomed 175 participants to the annual statewide bicycling and walking conference, ***Moving Together 2008***. Undersecretary Stern reminded the participants that bicycling and walking make good sense for a variety of reasons: they're healthy, efficient, environmentally sound, and multi-modal. She cited several recent initiatives, such as Bay State Bike Week, the new bicycle parking enclosures at the MBTA Alewife Station, and the Safe Routes to School Forum, as indicative of expanded interest.

The conference was held at the Marriott Courtyard Hotel in Boston and sponsored by EOTPW and MassHighway, along with the EOEEA/Department of Conservation and Recreation, EOHHS/Department of Public Health, and EOPSS/Highway Safety Division.

New to ***Moving Together*** this year, participants earned Baystate Roads Scholar points by attending the conference. Fifteen sessions were presented that covered facility design, Safe Routes to School, trail initiatives, police outreach, and healthy community programs.

The exhibit hall showcased current products, publications, programs and services designed to make bicycling and walking more accessible, enjoyable and safe, and served as a lively networking destination throughout the day.

Log onto the Baystate Roads website: **www.baystateroads.org/mt/** for more information. Hope to see you at next year's conference.

BAYSTATE ROADS SCHOLARS

Congratulations to the newest Baystate Roads Scholars on their fine achievement. Keep saving those certificates and you, too, could be listed here.

Robert Crowell, Dennis DPW
Lisa E. Demeo, Lowell Engineering
Kevin Farrell, Acton DPW
Joseph C. Foti, Chelsea DPW
Roy D. Greenwood, Framingham DPW
Ronald LaBrecque, Lowell Engineering
John T. Lyons, Falmouth DPW
Carl Maria, Acton DPW
Kevin R. McCarthy, Rutland DPW
Mohamed Nabulsi, Nantucket DPW
Robert Navin, Richmond DPW
Paul Newell, Greenfield DPW
Elizabeth Thurlow, Grafton DPW
William Tyack, Wenham DPW
Marlo Warner, Greenfield DPW
Daniel Warren, Arlington DPW

Please provide T-shirt size, your address and your supervisor's name, title, and address when notifying Baystate Roads Program of your status. Our workshop database will confirm your attendance. Notify BRP by FAX: 413-545-6471 or email: baystateroads@hotmail.com

REMINDER

MIIA (Massachusetts Interlocal Insurance Assn.) offers credit points for participation in Baystate Roads Program's workshops by reducing your town's insurance premiums. This is the 6th year of the Rewards Program that is designed to provide MIIA Property and Casualty and Workers' Compensation insurance members with an avenue to save money.

A DPW supervisor will receive a credit of 1% after completion of the Roads Scholar Program by submitting a copy of an official certificate. There are other categories that offer additional savings by attending MIIA seminars or participating in E-learning/training activities. Check out the website for specifics:

www.emiia.org/services/rewards.html

MASTER ROADS SCHOLAR
WILL STRATFORD
LEVERETT DPW

Will graduated from Amherst Regional High School and began working for the Leverett Highway Department in 1985 as a part-time employee. A few years later he was promoted to Highway Superintendent (at the ripe old age of 24) when the former Superintendent retired. His family's long history in town made him a perfect match for the job as he is devoted to the community in which he grew up.

During his tenure of 23 years, Will has seen many changes in this rural town of 2,000. There are 24 miles of paved roads balanced by 12 miles of gravel roads that are protected by a zoning bylaw to remain gravel. He is currently Highway Superintendent and Superintendent of Building Maintenance since the town has recently added a large elementary school addition, new library and new public safety complex. Will belongs to the Tri-County Highway Superintendents Board of Directors, Leverett Emergency Management Committee, School Safety Committee and, previously, the Franklin Regional Council Governments Purchase Advisory Committee. He is a member of the Massachusetts Highway Association and Massachusetts Tree Warden's Association.

Will has been attending Baystate Roads workshops since 1995 and has developed positive interactions with fellow employees, colleagues in neighboring towns, and residents which are vital to the success of his department. The biggest challenge currently is attempting to maintain town roads with less money.

In his spare time, Will enjoys hunting, fishing, kayaking, and camping in Nova Scotia but also enjoys spending time at home with his wife, Lisa, and two children.

MASTER ROADS SCHOLAR
WILLIAM DAVIS
ASHBY DPW

Bill has been working at the Ashby DPW since 1987 when he was hired as a truck driver but quickly became a heavy equipment operator. In 1992 he was promoted to Highway Superintendent at the age of 29. He supervises four employees who maintain 54 miles of roadways under local jurisdiction. Special interests include serving as captain of the volunteer Ashby Fire Engine Company #2 and town constable.

Bill was familiar with equipment coming from a farming family and he credits this "education in the field," mentoring from his predecessor and training through Baystate Roads Program as contributions to his success. His father, grandfather and uncle also worked at highway departments over the years.

Accomplishments include capturing over $2,500,000 of Chapter 90 grants. All have been approved and completed at or below cost estimates. In addition, Bill has written specifications for and purchased over $1,000,000 of town highway department vehicles and equipment. A project requesting $473,000 from the Small Towns Roads Assistance Program (STRAP) has been submitted and, at present, is considered an acceptable project and under review. This is the first time Ashby has been eligible for the program and Bill's first attempt has passed the initial hurdles.

Current challenges are similar to most towns: trying to not only maintain but also improve services with fewer personnel, reduced funding, and inceasing costs.

Snowmobiling, riding his Harley and cruising in his convertible are some hobbies that he enjoys in the north central part of Massachusetts.

MASTER ROADS SCHOLAR
THOMAS GREEN
WEST BRIDGEWATER DPW

Thomas Green served West Bridgewater as acting superintendent of streets in 1996 and was appointed officially to that position in 1997. He oversees five employees and 60 miles of roads, most of which are paved in this town of 6,000 in southeastern Massachusetts. When he started, the DPW worked out of a small building but is newly housed in a 60' x 200' space.

Tom started working at West Bridgewater on November 5, 1996, but had to rev up quickly when a super snowstorm hit January 7, 8, and 9 in '97. Since then, he has paid close attention to the Snow and Ice Control workshops presented by Baystate Roads covering new applications and techologies.

Mr. Green welcomes challenges such as resurfacing when funding is low and is proud of his accomplishments with these restrictions. He credits his success to support from his crew and help from many townspeople. Current projects include two bridges ranging in cost from $1,000,000 to $2,100,000 and a $2,200,000 reconstruction in the center of town that is finally coming to fruition.

Tom is in charge of the town's transfer station where an amusing incident brought national attention (Jay Leno even) to hazardous waste believed to have come from a West Bridgewater trash dumpster. It seems a cat receiving radiology treatment for cancer had an owner who neglected to properly dispose of the cat litter. The newpaper headline read "Radioactive Cat Poop Costs Town $2,000" after it was discovered by SEMASS during a scan.

Hobbies include fishing, renovating houses and spending time with his wife and eight grandchildren.

MASTER ROADS SCHOLAR
NEIL ANDRES
EASTHAM DPW

While a graduate engineering student at UMass Amherst, Neil Andres shared an office with the newly implemented Baystate Roads Program. He helped with workshops in exchange for free lunches and became interested in public works. A research project on estimating the lives and costs of pavement maintenance treatments introduced Neil to many veteran public works officials who shared their knowledge and enthusiasm for quality asphalt pavements and local public works.

Neil started his professional career as a Transportation Engineer at the Cape Cod Commission. In 1994 he accepted a position as Superintendent of Public Works for the Town of Bourne. There he accomplished many roadway and storm water projects and operated a regional landfill. In 1999, Neil went to work for his hometown of Barnstable as Highway Supervisor where he was responsible for over 400 miles of roadways, 27 traffic signals and a cantankerous drawbridge that always broke on weekends. He is currently working as Superintendent of Public Works for Eastham -- a beautiful town on the Atlantic Ocean.

Neil has served as President of the Barnstable County Public Works Association, on the Board of Directors for Massachusetts Highway Association, and as Vice Chair of the ASCE Local Roads and Streets Committee. He has participated in many MassHighway Department initiatives such as the Project Development and Design Guide Committee and the Massachusetts Pavement Quality Initiative Committee.

On his days off, you will usually find him on the water.

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The Baystate Roads Program, which publishes Mass Interchange each quarter, is a Technology Transfer (T2) Center created under the Federal Highway Administration's (FHWA) Local Technical Assistance Program (LTAP). This newsletter is prepared in cooperation with The Excecutive Office of Transportation (EOT) and the United States Department of Transportation Federal Highway Administration. FHWA is joined by EOT, UMass Transportation Center at the University of Massachusetts/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 Baystate Roads Program facilitates information exchange by conducting workshops, providing reports and 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.

LTAP Local Technical Assistance Program

To contact the Baystate Roads Program call (413) 545-2604 or FAX 413-545-6471

Massachusetts Executive Office of Transportation
Federal Highway Administration
UMass Transportation Center

STAFF CHANGES AT BAYSTATE ROADS

Program Coordinator, Matt Tassinari, resigned to accept a job as a "Genius" with Apple Computers. He began working at Baystate during his undergrad years as a computer science student and transitioned to a professional staff position in 2004. The best part of his new job will be "helping people understand computers," said Matt. During his four years with Baystate, he developed our website, initiated online workshop registration, assisted with many seminars, and starred in the salt calibration video which has been distributed throughout New England.

Matt's parting words: "I enjoyed meeting and helping everyone involved with LTAP on local, regional and national levels. So, if you have a broken IPod or are in need of a new Apple, come see me at the Apple store in Holyoke Mall right off I-91."

in this issue

Matt is taking another workshop on the road