

InMOTION



Engineers as Advocates *(continued from page 1)*

What can we do? Engineering and transportation organizations like ACEC, AASHTO, ASCE, and ASHE, as well as various construction/contracting groups, are marshalling proactive efforts at state and national levels to address these financing problems. We need to participate actively in these conversations.

Don't delete those email requests for participation and support in this area. Write your senators and representatives. Assist in educating the public. Talk to people at social gatherings. Contribute to ACEC and other infrastructure-focused PACs.

As always, I am optimistic that we will overcome these problems. At the national level, after entitlements, such as Social Security and Medicare, and interest on the national debt, defense and transportation spending are high on the budget list. With defense spending likely to be cut over the next few years, the investment in infrastructure, and its beneficial impact on jobs and the economy, offers a real economic stimulus while addressing a critical national need. For these reasons, SAFETEA-LU is likely to be reauthorized at a reasonable level.

Many states are already addressing infrastructure needs. Pennsylvania's Act 44, although not fully implemented, promises one billion dollars per year in transportation funding. New Jersey is contemplating a \$40 billion bond issue financed by toll increases to address state debt and infrastructure requirements. Other states are acutely aware of the vital role of transportation in the national and local economies and many are taking action, as well.

Certainly, our industry's future direction is at stake. More important, the overall public good, in terms of our transportation system's future operation, is at risk.

Join the dialogue. Better yet, lead the discussion!

Helping MART Start Small and Smart *(continued from page 3)*

Making the Line More Reliable

The Fitchburg Commuter Rail Line Improvement Project will modernize an existing commuter rail line to provide greatly improved service and reliability to riders and commuters in a 50-mile long corridor extending from Fitchburg to Boston, Massachusetts. Currently, the Fitchburg Line is the longest, slowest, and among the oldest and least reliable in Boston's commuter rail network. Nevertheless, approximately 10,000 daily riders stick with current Fitchburg Line service due to the lack of other reasonably available commuting options to the Boston job market.

A key part of McMahon's work with MART involved conducting the Alternatives Analysis that is required as part of the Small Starts process. As a result, MART was able to establish and prioritize a long list of infrastructure improvements that will confer the following benefits to the riders, communities, and operators of the Fitchburg Line:

- Modernize infrastructure allowing 80 mph travel speeds
- 945 hours per day travel time benefits for existing riders alone
- Service reliability increase from 83 percent to over 95 percent on-time performance
- Significantly enhanced passenger experience
- Support of statewide and regional economic development goals
- Reduced operating and maintenance costs, even while attracting new riders

McMahon is continuing to support the project as it moves into implementation.

Engineers as Advocates

by Joe McMahon, P.E., CEO



As professional transportation engineers our mission is to serve the public good. Recent local and national events and trends are effectively a call to action.

The tragic bridge collapse in Minnesota, an estimated \$16 billion shortfall of the National Transportation Trust Fund in 2009, the uncertain future of reauthorization of the Trust Fund after SAFETEA-LU expires in 2010, local infrastructure financing shortfalls in many states, and an uncertain national economy, all point to a need for action.

At McMahon, our focus is on all aspects of transportation. The need to repair and replace our existing infrastructure, make better use of the facilities we have, and judiciously add new links and/or expand existing facilities, is our vision of the foreseeable future.

The National Transportation Policy and Revenue Commission unveiled its "Transportation for Tomorrow" Report on January 15. The Commission estimates a need to spend \$225 to \$340 billion annually at all levels to maintain and improve our transportation system. Funding today only addresses 40 percent of this. Among the recommendations, some controversial, is a 40-cent increase in federal gasoline taxes, increased tolling of facilities, and a vehicle miles of travel charge.

(continued on page 4)

Mandatory Continuing Education for Professional Engineers: Is it a Big Deal?

by Rodney P. Plourde, Ph.D., P.E., President

A majority of the states in this country have mandatory continuing education requirements for registered professional engineers to maintain (renew) their licenses. As of January 2008, of the 11 states in which I practice, three: Maine, New Hampshire, and Florida, have these requirements. Soon Pennsylvania will be added to that list, and probably Virginia, next. What do these requirements generally entail? For Florida: eight professional development hours (pdh's) every two-year license renewal. For Maine and New Hampshire: 30 pdh's per two-year renewal. For soon-to-be Pennsylvania: 24 pdh's per two-year renewal.

There has been much debate on mandatory continuing education for professional engineers, with national professional engineering societies typically advocating this requirement, and some state boards of registrations and some practicing engineering locally resisting this mandatory requirement. The biggest pro cited is the reason for this requirement: that practicing engineers charged with protecting the public's health, safety, and welfare must stay current with the tools and products of their practice. Perhaps the most cited con is the cost, in terms of time and actual expense, in fulfilling these requirements. Both often come solely out of the practicing engineer's pocket, with little to no assistance from the engineer's employer.

Many Ways to Gain Pdh's

Without minimizing the time/cost/expense factor in meeting a pdh requirement, most state boards of registration provide much flexibility in defining those activities eligible for continuing professional engineering education. Pdh's accrue not just for formal courses taken at our universities, but for all technical seminars offered by our various engineering societies, national or local. Pdh's accrue even to the technical portions of professional engineering societies' lunch and dinner



Engineers are expected to protect the public's health, safety, and welfare. We're glad to see more states call for registered professional engineers to maintain their licenses with continuing education.

meetings featuring speakers on engineering topics, as well as to active participation on committees of these engineering societies. Also noteworthy, with the increased number of states requiring mandatory continuing education, professional engineering societies and other accredited for-profit providers offer a host of online seminars and courses which don't require the engineer to leave his desk at work or home to participate, often at reduced group rates.

Engineers are often labeled as conservative in all aspects, which is why we became engineers! That moniker doesn't bother me, or many of my peers, because the services we provide and products we engineer are for public use. Sometimes, this conservatism may also be reflected in our resistance to change. Mandatory continuing education is not a big deal, I submit. It's intended for us to embrace the changing technology of our profession, for the public good. This purpose justifies the requirement. The end to that means is not difficult. Eventually, it will be required by all states. So let's just get on with it and do it!

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The Right to Driveway: Balancing DOT Initiatives with Driveway Plans

by Mike Spitz, P.E., Senior Project Manager

Driveways. They provide access to your property and can significantly impact the value of a parcel. However, state and local departments of transportation (DOTs) seek to control their location and frequency. This practice is called access management and it can have a significant effect on the success of a business or new development. So how can you work with a DOT to ensure significant access to your property?

Why Access is Controlled

First, a DOT will not completely close access to a piece of property, as that right is generally protected by law. However, they do have the right to limit the number and types of access points and their locations. The criteria they use to determine these locations includes:

- Volume of traffic using the access
- Volume of traffic on the roadway
- Proximity to access points for adjacent parcels
- Proximity to intersections and median openings
- The need for right- or left-turn lanes into the property

Driveway spacing is controlled to reduce the impact to vehicles on the roadway caused by vehicles turning into and out of developments. The intent of increasing the spacing requirement is to reduce the amount of stop-and-go traffic and consequently reduce the amount of rear-end collisions. In this case, it frequently becomes a safety consideration for the DOT.

Median openings are used to control left turns. This is important because the conflict of left-turn movements with oncoming traffic is generally the most dangerous maneuver drivers make. Crashes resulting from this conflict will often result in the most severe injuries to the vehicle occupants. The median has another benefit in providing a refuge location for pedestrians trying to cross the roadway.

Work With DOT's Long-term Plans

The decisions for driveway spacing and median placement are usually made by DOT staff or a consultant working for the DOT. The important thing is to maintain awareness for upcoming roadway projects in front of your property. The DOT publishes a work program that details all of their planned projects for the next three to five years. It can be challenging to constantly monitor this program, especially because it changes on a yearly basis. If your property fronts on a roadway that already has medians in place, then the decisions have likely been made and nothing will change in the near future. If your property is on a multi-lane roadway with a center turn lane, or a roadway that is planned for widening, then it is more likely that the DOT will be looking at installing medians at some point in the future.

Most DOTs have a liaison staff whose job is communication with the public and help to answer questions concerning these types of issues. The DOT liaison can let you know what is planned for the roadway in the near future. It is important to talk with these contacts if you are planning a new development or are doing due diligence on a property prior to purchase.



This new median under construction in Fort Myers, Florida, will limit access along State Route 80.

DID YOU KNOW?

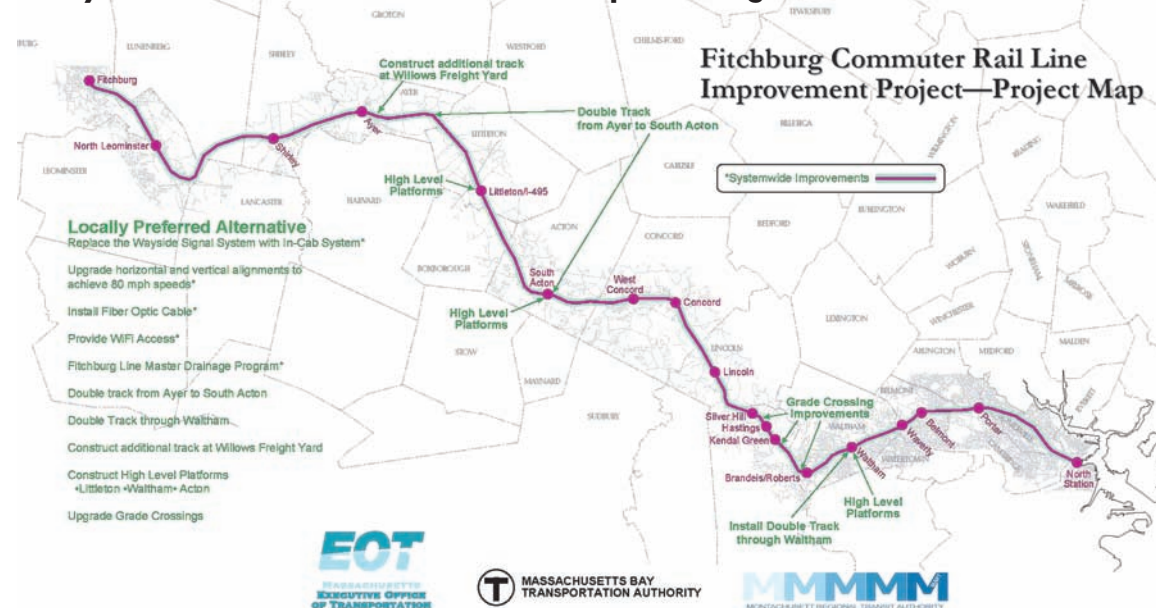
The Thomas D. Larson Fund will promote professionalism in transportation and support a variety of purposes.

Tom Larson co-founded the Pennsylvania Transportation Institute (PTI) in 1968 at the Pennsylvania State University and became PTI's first director. He is credited for reshaping PennDOT during his tenure in the state level, and it turned into one of the best-managed agencies in the nation. After accepting a position with the Federal Highway Administration, Larson moved the national transportation system into the post-interstate era, while championing research and technology.

In recognition of his contributions to transportation, the university has endowed a scholarship to engage transportation undergraduates and graduate students in interdisciplinary programs, develop academic and research programs that demonstrate the importance of integrating public and private sector transportation issues, establish undergraduate scholarship and graduate fellowship support, enhance transportation-related teaching and research facilities, and provide students and faculty with state-of-the-art equipment and technology. McMahon is proud to be a Founding Member Corporation of this endowment that will continue Dr. Larson's legacy for future generations of transportation professionals.

Helping MART Start Small and Smart

by David Farmer, P.E., AICP, Senior Project Manager



McMahon helped the Massachusetts Regional Transit Authority (MART) reach a new milestone in transit funding this November, when MART received approval from the Federal Transit Administration (FTA) for funding the Fitchburg Commuter Line Rail Improvement project under the FTA's new Small Starts program. This marks the first approval of a federally funded Small Starts project in Massachusetts, and one of only a handful of similarly approved projects across the country.

Small Starts, Important Projects

The FTA established its Small Starts program to encourage development of small, but vitally important,

transit projects. The program enables FTA to provide up to \$75 million in funding for any qualified project that has a total project cost of under \$250 million and either:

1. involves fixed guideway (e.g., railroad tracks) for more than half its length, or
2. provides intensive bus service (e.g., 10-minute peak period headways) along a designated corridor.

For McMahon Associates, the FTA Small Starts approval was the culmination of more than four years of working with MART; the Massachusetts Bay Transportation Authority, which operates the Fitchburg Line; and key stakeholders. *(continued on page 4)*

NEWLY AWARDED PROJECTS

NEW ENGLAND

- Chapter 43D Related Planning and Permitting Consultant Services, MassDevelopment, Statewide, MA
- Holyoke Transit Oriented Development District Project, City of Holyoke, MA
- Bus Route 309/Arborway Corridor Improvements, MBTA, Jamaica Plain, MA

MID-ATLANTIC

- Intersection Improvements at Park Road (SR 1010) and Business Route 222 (SR 2005), PennDOT District 5, PA
- Traffic Signal Design Open End Contract (2nd consecutive term), PennDOT District 6, PA
- Traffic Planning for Independence, a Mixed-Use Community, Charter Homes, East Hempfield Township, Lancaster County, PA

FLORIDA

- Transportation Element Update, City of West Palm Beach, FL
- Matanzas Pass Bridge Pedestrian Corridor Plan, Town of Fort Myers, FL
- Consultant Traffic Engineering Services, Town of Haverhill, FL

OUR SERVICES

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- Transportation Planning
- Highways
- Transit
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- Structures
- Dams & Water Resources
- Highway Safety
- Land Survey
- GIS
- Construction Observation & Maintenance

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