



Ring in an Optimistic New Year

By Joe McMahon, P.E., CEO



As I write this, McM is nearing the end of a very successful year. Each of our three regional practices — Pennsylvania, Florida, and Massachusetts — has had a successful year. We have been blessed equally by our clients with abundant work, and by our staff, who are dedicated to doing the work timely and well.

Our 2003 retrospective has included recognition and awards. And while gratifying, it reflects the rewarding relationships we have formed both within and outside the company.

At McM, we work hard and we play harder. Our Christmas celebrations were a blast, and traditionally we choose this time of year to recognize our staff with promotions. Being recognized publicly at a festive gathering of your peers with spouses or significant others is special.

In addition to staff promotions, we also welcomed four new shareholders: Lou Possanza, Carolyn Gish, Matthew Kozsuch, and Andrew Brown. These individuals demonstrate both leadership and loyalty.

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Multi-Modalism: Issues in Urban Transportation Planning

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

Joe McMahon, CEO, and I recently presented our thoughts on today's "real world" issues facing transportation engineers and planners to a class at the University of Delaware. These issues are but a microcosm of the many diverse considerations that transportation engineers and planners must address in taking even moderately complex projects in urban areas through planning and design, to construction and implementation.

Funding transit match may go to 50/50

Payment is always an issue with transportation projects, as municipalities and counties depend heavily on infusions of funding from transportation authorities and DOTs, and they in turn, from the U.S. Department of Transportation. The recently reauthorized federal Surface Transportation Act (TEA-21) reauthorization, now called "SAFETEA" by the administration, maintains an 80/20 federal/local match for highways, but may reduce transit funding to as low as a 50/50 match for at least new starts, if not all capital programs. Decreased transit federal match dollars will place more of a burden on state DOTs and regional transportation authorities to make up the difference.

Defining the targeted traveler

Is the available funding going to be spent on intercity travelers; intracity travelers, who both live and work in the urban areas; or some mix of both? Travel distances, times, and costs are greater for the former than the latter and often dictate two different types of improvements (e.g., heavy or light rail on fixed routes versus local bus service on city streets).

Infrastructure constraints

The existing roadway environment imposes constraints on major improvements, including availability of transportation rights-of-way, costs, environmental impacts, and community impacts, more so than in less dense, suburban, or rural areas.



Transportation engineers and planners must take complex issues of funding, safety, and the existing environment into account for each project.

Environmental constraints

An engineering project may have major effects on the site's environment, which may include air pollution, increased noise levels, residential and business displacements, and more — especially in urban areas. The greater the potential environmental impacts, the more costly and lengthy the state and federal environmental clearance processes for permitting and mitigation can become. It's not uncommon for some major projects to take up to 15 years before the necessary approvals are gained for construction!

Capacity vs. livability

Because of the impacts of transportation improvements on urban neighborhoods, business districts, and cultural resources, federal and state DOTs must pay significant attention to these issues, with the requirement of "context sensitive design." In layman's terms, this means that improvements must balance quality of life with capacity and service gained. Streetscape amenities and traffic calming methods are excellent examples of context-sensitive design improvements.

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For more information, please contact **McMahon Associates** at any of the following locations:

Mid Atlantic

Fort Washington, PA

215.283.9444 • fax: 215.283.9445
email: fortwashington@mcmtrans.com
Joe DeSantis, P.E., P.T.O.E.
General Manager

Middletown (Harrisburg), PA

717.985.1700 • fax: 717.985.0600
email: harrisburg@mcmtrans.com
John Yacapsin, P.E.,
Senior Project Manager

Exton, PA

610.594.9995 • fax: 610.594.9565
email: exton@mcmtrans.com
Chris Williams, P.E.,
Senior Project Manager

Florida

Palm Beach Gardens, FL

561.840.8650 • fax: 561.840.8590
email: palmbeachgardens@mcmtrans.com
John DePalma, General Manager

Fort Lauderdale, FL

954.771.0776 • fax: 954.771.1754
email: fortlauderdale@mcmtrans.com

Cape Coral, FL

239.945.6103 • fax: 239.541.1383
email: capecoral@mcmtrans.com

New England


Boston, MA

617.725.0099 • fax: 617.725.0049
email: boston@mcmtrans.com
Bill Steffens, General Manager

On the Web

www.mcmtrans.com

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New England Regional News

Part 1: Logan Airport Survey Aimed at Air Traveler Transportation Habits

by Craig Leiner, Senior Project Manager



McM assisted Logan International Airport by conducting a survey aimed at understanding which modes of ground transportation air travelers use to access the airport.

To gain valuable information on air traveler characteristics and the ways they access airport grounds, most major airports conduct periodic air passenger surveys, whose results help to gauge the environmental impacts of travel and shape future improvements.

The Massachusetts Port Authority (Massport) conducts periodic travel surveys of Logan Airport employees, air passengers, and Logan Express Bus riders, and then taken together, these efforts provide the authority with customer profiles and important insights into the ground access characteristics of employees and travelers.

McM helps Logan conduct survey

McMahon Associates assisted with the management and implementation of the most recent Logan Airport survey. In October 2003, for two
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Florida Regional News

Advanced Technologies Ease Parking Problems

by John DePalma, Associate & General Manager, and Kim D'Aprile, Administrative Assistant

In cities known for shopping or tourism, parking presents several challenges in terms of time spent driving in search of available spaces, additional fuel used, and increased pollution — not to mention worsening driver temperaments.

Now, new parking technologies and those in development can be used to alleviate parking problems, especially when parking issues are part of a complex traffic study.

Advanced Parking Management Systems

New developments in information technology have made it possible for dynamic displays on roadway signs, the Internet, and mobile devices to provide drivers with helpful information about nearby parking facilities, from lot availability and space occupancy, to location and pricing. Even within garages, light systems exist to notify drivers of occupied spaces and levels. Such advanced notification saves driver time and frustration, as well as saving fuel and preventing unnecessary pollution and congestion.

Engineers combined their knowledge of roadway

network congestion with driver behavior predictions to develop an effective Advanced Parking Management System (APMS) for major traffic generators and urban streets. Due to Florida's popular tourism industry, many beach and coastal cities are taking advantage of these sophisticated APMS solutions to improve their communities.

Space-saving automated parking structures

Fully automated parking structures, like those used in Europe, require the driver to pull into a parking enclosure, where an elevator then places the vehicle in a secure space. These automated structures use hydraulic lifts to pack cars vertically into a space-saving garage. Automated parking structures provide comfortable, safe settings which require mechanical maintenance but not parking attendants or security.

These technologies slowly are surfacing in projects that McMahon Associates, Inc. is involved in due to our transportation knowledge and desire to seek innovative solutions.

Age-Qualified Residential Communities Trim Traffic Counts

by Kenneth O'Brien, P.E., Project Manager



Residents in age-qualified communities, such as Ann's Choice in Bucks County, generate fewer trips per day during peak commuter hours.

Nursing homes and retirement communities have been around for decades, but a new type of residential development is gaining popularity among aging baby boomers in this area. Age-qualified housing developments typically require residents to be at least 55 years old with only children over the age of 18. Although many residents continue in their careers and live active lifestyles, they tend to generate fewer car trips during the typical commuter peak hours, as compared to residents who live in other typical residential communities.

To investigate the disparity between peak hour trips generated by different populations with similar, active lifestyles, McM conducted peak hour traffic counts at local age-qualified communities to determine their local trip generation characteristics. Furthermore, McM researched nationally accepted trip generation data based on the latest 2003 publication by the Institute of Transportation Engineers (ITE), entitled Trip Generation, 7th Edition. As a result, based on both the local counts conducted

by McM and ITE data, we are able to confirm that age-qualified communities generate fewer trips than typical residential communities, such as conventional single family homes. As a comparison, 10 conventional single-family homes generate approximately 10 trips during weekday afternoon commuter peak hour, whereas 10 age-qualified homes generate approximately three to five trips during the same peak hour.

Older driver population may prompt more stringent traffic requirements

Although age-qualified communities generate less commuter peak hour traffic, because of the older driver population PennDOT views these residential developments differently with greater access requirements. PennDOT generally requires the accesses to age-qualified communities along State Highways to have separate left- and right-turn lanes for traffic entering the community. In other communities, turning lanes may not be necessary depending on various factors, such as the expected traffic volumes.

In summary, age-qualified communities are one of the lower traffic-generating residential land uses, particularly during peak commuter travel times, as demonstrated through national studies and local traffic counts conducted by McM. However, because of the older driver population, the access design requirements associated with these developments may be more stringent than regular residential neighborhoods, no matter the size or how low the trip generation.

Did you know?

In its 151st year, the American Society of Civil Engineers elected Patricia D. Galloway, P.E., F.A.S.C.E., PMP, to serve as its first female society president. Established in 1852, this "all-boys" club allowed women to join the society in 1927. Ms. Galloway was installed in November 2003.

New Projects

New England

- **ITS Implementation** for the Brockton Area Transit Authority, Brockton, MA
- **Traffic Impact Studies** for Cumberland Farms stores in Brockton, MA, West Bridgewater and Glastonbury, CT
- **Project Notification Form and Project Impact Reports** for Trinity Financial, Boston, MA

Florida

- **World Cup 2006 Cricket Tournament Traffic Evaluation**, City of Lauderhill/Broward County Regional Park, FL
- **Neighborhood Traffic Calming Projects** for four sites in Deerfield Beach, FL
- **Traffic Calming Project** for NW 47th Street in City of Lauderhill, FL

Mid-Atlantic

- **Open-End Traffic Engineering Contract**, PENNDOT District 3-0, PA
- **West Brandywine Township Act 209**, Chester County, PA
- **Relocation of Funks Road**, Clemens Family Corporation, Hatfield Township, PA

Ring in an Optimistic New Year

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They represent a resounding "yes" answer to the most vital question I ask myself when we consider new shareholders: Is this person someone I want to be in business with?

We also celebrated two new Associates – Jack Mitchell and Chris Williams. Both of these fine professionals exhibit the best of what McM seeks to be. Besides outstanding professional achievements, they are genuinely good human beings. A future of great leadership for McM is assured with these and our other Associates.

Our 2004 outlook is optimistic. With our staff in place, we stand ready and excited to face the challenges and opportunities of the year ahead.

Social equity, justice considered

Similarly, federal regulations require that transportation improvements serve all travelers, not just a certain class of travelers. Additionally, their impacts cannot be disproportionate to one class of neighborhood or business district over another.

Citizen participation is essential

For all of the reasons above, active citizen participation is an important and integral part of the planning and design process for transportation improvements in urban areas. All stakeholders, including residents, community and business leaders, and public officials, must buy in. If not, the results could, at best, be a lengthy time before implementation, or at worst, no project!

Sustainability

Finally, after the improvement is constructed and opened, are the proper resources in place to operate and maintain it? What are the ongoing funding requirements, and who pays?

As investment in today's transportation infrastructure becomes increasingly more complex, especially in urban areas, engineers must take into account the complexity of funding, environment, infrastructure, and more to ensure a successful project.

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New England Regional News

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weeks, fieldworkers collected more than 8,000 surveys comprised of 26 questions, which were distributed to departing passengers over age 18 in waiting areas adjacent to each gate.

The survey yielded the following information:

- Profiles of air passengers
- How they enter and leave the airport
- Trip purpose, origin, and destination
- Terminal activities
- Demographics

Massport has conducted air passenger surveys targeting departing passengers approximately every three years since 1979. The survey provides the database for much of Massport's ground-side air passenger planning, and supports the authority's environmental reporting requirements under the Massachusetts Environmental Policy Act (MEPA). For example, data have been used for commercial parking analysis, curbside allocation and design, and developing new ground access services.

Further, the data collected in the survey is essential for several of Massport's highly visible reporting and planning requirements. The authority submits a Logan Airport Environmental Data Report (EDR) annually to the Massachusetts Executive Office of Environmental Affairs, MEPA Office. The EDR is a comprehensive document about air quality, noise abatement, activity levels, and ground access modes. Massport has set a goal of 35.2 percent High Occupancy Vehicle (HOV) mode share once passenger levels reach 37.5 million annually. The current HOV mode share, as reported in the 1999 survey, is 30.7 percent.

In the next issue of *McMahon in Motion*, we will present the results and uses of the survey.

We Answer Your Transportation Questions

McMahon in Motion features one reader's question on transportation in each issue. Our traffic engineers will answer your question in the following issue. Please submit your questions via email to fortwashington@mcmtrans.com.

QUESTION: (from previous issue): When weather impacts roadway safety, mobility, and productivity, what three road weather management strategies are used to respond to environmental threats?

ANSWER: Advisory strategies provide information on prevailing and predicted conditions to both transportation managers and motorists. Control strategies alter the state of roadway devices to permit or restrict traffic flow and regulate roadway capacity. Treatment strategies supply resources to roadways to minimize or eliminate weather impacts. Many treatment strategies involve coordination of traffic, maintenance, and emergency management agencies. These mitigation strategies are employed in response to various weather threats including fog, high winds, snow, rain, ice, flooding, tornadoes, hurricanes, and avalanches.

NEXT QUESTION: What changes in traffic control devices will the FHWA soon implement to help older drivers, pedestrians, bicyclists, and workers?

Look for the answer in our next issue of *McMahon in Motion*.

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