



## Ambivalence and Gratitude

By Joe McMahon, CEO



My wife Peggy and I recently sold our home of 30 years. A young couple with three girls knocked on our door and asked to buy the house! Being empty nesters in a large house, we could see the logic of moving on to the next stage of our lives.

On settlement day, a beautiful sunny day, we walked through the empty house with the young couple. They left and Peggy and I were alone sharing the very strong emotions of leaving an old friend who had shared a large part of our lives.

McMahon Associates has gone through many of these kinds of moves, particularly in the past 10 years of rapid growth. It is always exciting to look ahead to what's next. Our experience with the house tells me it is also very important to stop occasionally and look back at what you are leaving behind.

Just as we were grateful to our home for providing a center for us, I am grateful to the people at McMahon Associates for years of effort and teamwork which make the company so much more than just a place to work.

I am also grateful for the many clients and friends of McMahon Associates. Someone once told me that the meaning of "consultant" is to be a "trusted advisor." So many clients have allowed us to be their trusted advisor.

A while ago, one of the many new folks at McM met Peggy and me for the first time. They sent us a note that thanked us and said we were nice people. That little note meant an awful lot to me.

So I want to take this opportunity to thank all of McMahon's associates, present and past, and our clients and friends. You have so enriched my life experiences. The past has been wonderful and rewarding, and our future promises to be even more so.

## Professional Engineer Career Development: What Does it Take?

By Rod Plourde, President



In this summer's *McMahon in Motion*, Joe McMahon, CEO, graciously recognized my succession to President. To the McMahon family, I offer my heartfelt thanks for their confidence in my abilities to lead this firm.

After my promotion announcement, I received many congratulations and best wishes from clients, fellow engineering professionals, and friends. I was also privileged to be interviewed by the National Society of Professional Engineers for an article that appeared in the September 2002 issue of their national magazine *Engineering Times*. The question specifically asked of me was "What does it take for a young engineer to become president of a firm?"

Upon reflection, I developed my perspective on successful career development which I hope will be helpful to both engineers and all young professionals who may read our newsletter.

### Stages of Professional Careers

I believe that engineers and other professionals develop and advance their careers in three stages by being a good:

1. **Specialist**
2. **Project manager**
3. **Leader**

### Being a good specialist

The prerequisite of being a good engineer or professional is having a good education. While a bachelor's degree suffices for young people to enter a profession, I strongly recommend pursuing an advanced degree. For example, many national engineering societies now advocate that an advanced degree be a requirement for engineering registration. However, education alone won't make you a good specialist; it's what you do with it. Engineering problems and solutions are not

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## ITCs Provide Connections for Commuters

by Danielle Desmarais, Engineer

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McMahon in Motion is edited and designed by:  
Word Work Communications  
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## Did You Know?

President Bush signed a Supplemental Appropriations bill for FY 2002 that sets a minimum level of \$27.7 billion for highway funding, effectively protecting the funding level authorized for 2003 in TEA-21. In addition the senate voted unanimously to consider bolstering the sum already earmarked for highway maintenance after the summer recess. If approved, Transportation Appropriations Bill S. 208 could add an additional \$32 billion in funding. For more information, please view [www.acec.org](http://www.acec.org).



**Intermodal transportation centers (ITCs), like the one planned for Berkshire County, MA, are central hubs of transportation that offer many options, including bus, rail, and paratransit transportation.**

An intermodal transportation center (ITC) provides a seamless connection among various transportation options and a safe, comfortable, and convenient environment for those using public transportation services. Several regional transit authorities within Massachusetts have examined the feasibility of constructing ITCs within their regions to better serve their patrons and to assist in the revitalization and economic development of downtown areas.

Regional ITCs bring to fruition both transportation and economic development goals including:

- **Improved regional public transportation links**
- **Development or redevelopment within downtown areas**
- **Cross-platform transfers to other vehicles or modes**
- **Comfortable and safe indoor waiting areas**
- **Opportunities for joint development**
- **Reduction in reliance on the automobile**

### Case study: Berkshire County's ITC

The ITC currently under construction in Pittsfield, MA, by the Berkshire Regional Transit Authority, will serve as a depot for local and intercity buses, Amtrak intercity passenger rail, and local paratransit services for pedestrians, taxis, and bicycles. A parking garage to be constructed below the building will become a park-and-ride lot providing both short- and long-term parking. A community meeting room, travel information center, police substation, and retail space, expected to contain a newsstand and coffee shop, are also included within the design.

The amenities to be included in Berkshire County's ITC represent those expected at most of the proposed ITC sites throughout Massachusetts. U.S. Rep. John W. Olver spoke at the groundbreaking ceremony for Berkshire County's ITC and said, "We need a system where all of the cogs work together in an effective way; all are crucial pieces for an effective transportation system for the area." The development of a facility that will

join all modes of transportation into one central location, while also providing opportunities for joint development, will do just that, and enhance Massachusetts's transportation services.

## Two New Offices Open in Florida

McMahon has been growing rapidly in southeast Florida. As a result, two new offices have opened in addition to the Cape Coral (southwest Florida) office — one in Palm Beach Gardens and another in Fort Lauderdale.

- **Palm Beach Gardens, FL**  
7741 North Military Trail  
Suite 5  
Palm Beach Gardens,  
FL 33410
- **Fort Lauderdale, FL**  
6360 NW 5th Way  
Suite 301  
Fort Lauderdale, FL 33309

# Traffic Modeling Answers the Question, Will it Work?

by Marie Pantalone, Project Manager, and Ed Bromage, Senior Project Engineer

As traffic study areas grow, traffic modeling software becomes essential for its ability to factor in growth, employment, and travel patterns unique to a region. The resulting models are persuasive and reliable, particularly when viewed as moving traffic models on a computer screen.

McMahon is currently working on two separate projects with the Lancaster County Planning Commission and the Berks County Planning Commission on PennDOT projects, using transportation models to define traffic impacts associated with roadway improvements within a specific study area. These models help to demonstrate the effectiveness of specific transportation improvements and to assess the effectiveness of alternative improvements in meeting a project's goals.

Whether to determine the impact of a zoning change or to conduct a regional corridor study, accurate projections of traffic volumes are important, and can be as basic as applying an absolute background growth factor to existing volumes or as complex as employing a broad regional transportation model.

## Predicting the future through employment and growth rates

In a transportation model, there are three

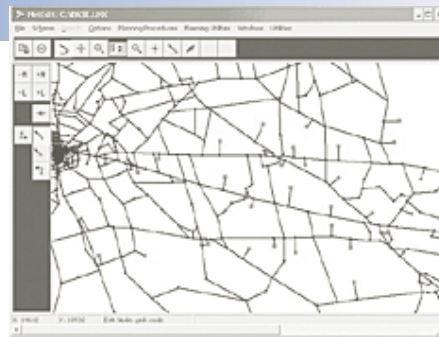
principle elements:

- the roadway network
- land uses within the area of study
- travel or behavioral characteristics of the users

Transportation model programs vary, but all incorporate assumptions about socioeconomic conditions within the area, namely population and employment estimates. Population estimates are based largely on municipality census data and projected based on the anticipated level of residential development over the future time frame.

Employment projections are usually divided among several employment sectors such as industrial, retail, and office, and are developed based on known business developments. With population and employment projections, the number of trips generated within an area will depend on the number of households, their sizes, and travel modes, plus trip origins and destinations, with emphasis on home/work trips.

Within the transportation model, engineering assumptions about the transportation system and its ability to accommodate trips translate into vehicle travel time and delay results. These measures are further used to



This traffic model can be used to test the impacts of transportation solutions in a study area.

forecast vehicle emissions for air quality. Because of the model's ability to assign origins and destination pairs to each vehicle within the system, vehicle miles traveled on a roadway segment can also be quantified.

## Seeing the big picture

By assigning continuous trips and seeking out the most logical routes, transportation modeling software forecasts more balanced and accurate projections when compared to the manual process of layering traffic onto a study roadway based on existing travel patterns.

In some software packages, a link between the transportation model and the capabilities of geographic information systems makes it possible to view transportation data in a graphic format. Such graphic simulations of how traffic flows through the study area with a variety of transportation alternatives help decision makers see clearly the benefits of potential transportation solutions.

## Florida Regional News

# Addressing Problems Facing South Florida: Part 2 — Safety and Security

By John S. DePalma, Associate and General Manager, and Kim D'Aprile, Administrative Assistant

Safety and security — especially in transportation — is a concern that affects both South Florida and our entire country. As a result, agencies have been combining efforts to create awareness of threats and to research safety options through cross-agency cooperation for the sake of our roadways.

McMahon continues to support city, state, and local governments in improving roadway networks through responsive transportation solutions the company has always provided.

## A team approach to transportation threats

Media attention after September 11, 2001 was keenly tuned to what engineers could do to promote homeland security. The American Engineering Campaign created a list of issues that engineers are currently addressing to make our nation safer.

Some transportation concerns include evacuation of power facilities, air quality on subways, global positioning systems (GPS) on trains, and increased safety on planes. Research toward implementing new tech-

nology that improves communication, coordination, and emergency responsiveness is already underway.

USDOT encourages and funds innovative approaches to detect and handle threats and maintain the integrity of our roadways. Many business sectors related to transportation are currently integrating their resources to increase the likelihood that security measures are implemented efficiently. Although these issues currently affect our entire nation, South Florida will benefit from combined efforts to combat terrorism.

## New Projects

### New England

- **Traffic Impact Studies** for 2 new Hess gas stations in Saugus and Dedham, MA
- **Signal Design** for Big Wise Supermarket in Walpole, MA
- **Redesign** of Needham Street in Newton, MA

### Mid-Atlantic

- **Highway Occupancy Permit Application Review** (4th consecutive contract), PennDOT District 6-0
- **Rehabilitation of the Henry Avenue Bridge over Wissahickon Creek in Philadelphia**, PennDOT District 6-0
- **Design for Target Store**, West Manchester, PA (HOP & Traffic Signal Design)

### Florida

- **Forecast Traffic** for the University Drive PD&E (project development and environmental), FDOT District 4
- **Floresta Drive Transportation Corridor Study**, City of Port St. Lucie, FL
- **Hillsboro Boulevard Enhancement Project**, City of Deerfield Beach, FL

# We Answer Your Transportation Questions

*McMahon in Motion* will feature 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 e-mail to [fortwashington@mcmtrans.com](mailto:fortwashington@mcmtrans.com).

**Question (from previous issue):** What are the goals of the Critical Infrastructure Response Initiative (CIRI) outlined by the American Society of Civil Engineers in terms of strategies to defend infrastructure from natural and man-made disasters?

**Answer:** The goals of the Critical Infrastructure Response Initiative (CIRI) are:

- **Assess** infrastructure vulnerability
  - **Prioritize** infrastructure renovation based on the results of vulnerability assessments
  - **Determine** research and development directions that will help to protect critical elements of infrastructure
  - **Develop** retrofit designs to mitigate disaster damage
  - **Formulate** new design procedures, including codes and standards
  - **Improve** disaster preparedness and response procedures
- In addition, CIRI will examine the vulnerability of several infrastructure systems, specifically water supply, transportation, waste management, energy, and telecommunications.

**Next Question:** What revolutionary development of advanced systems demands an equally revolutionary plan for deployment?

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

## Professional Engineer Career Development: What Does it Take?

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always black and white. That's where practical judgment and common sense are necessary. Finally, in my opinion, a good work ethic and dedication round out the qualifications of a good specialist.

### Being a good project manager

Like a good education, Professional Engineer registration or comparable registrations won't make you either a good engineer or a good project manager, but it is necessary so that regulatory and reviewing agencies, governing bodies, your clients, and the public recognize you as an expert. Added skills are necessary for project manager development, especially good oral and written communication skills. Project managers must have the ability to communicate, defend, and sell their product to clients, agencies, and the public. Thirdly, often the primary difference between a project manager and a good project manager is innovative thinking and creativity. If the square peg doesn't fit in the round hole, alter them until they fit! Last of all, success in professional consulting is based on relationships formed with clients, agencies, and our consulting competitors — which are all key to a project manager's and future leader's ability to bring new work into the company.

### Being a good leader

Lastly, being a good leader requires at least three prerequisites. The first — leadership qualities — includes integrity and respect, caring for staff first, then clients; mentoring staff and future leaders; and volunteering to professional societies and the community. Second, you must be both a fighter and a compromiser. With fourth down and one yard to go, you need to know when to go for it and when to punt. A good leader also needs to be more than just strong technically. You have to aspire to acquire business acumen, most often acquired on the job. But I also encourage courses and advanced degree work in business or management to give one a solid background for making good business decisions.

In closing, I hope that my thoughts are helpful to readers who have similar ambitions, and I again thank all my family and friends and other professionals who have helped make it possible for me.

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