



Managing the Tiger

By Joe McMahon, President

Since 1995, McMahon Associates increased revenues fourfold and grew from two to six offices. The number of full-time employees has quadrupled, from 25 to almost 100.

During this time, services have expanded from traffic impact studies and minor signal and highway design to a comprehensive array of



services, including transportation modeling, Intelligent Transportation Systems, public transit, and major highway design and implementation services. Clients evolved from a private sector focus on corporate and developer clients to a mix including counties, municipalities, and departments of transportation.

Amidst this rapid growth is the feeling that sometimes we've got a tiger by the tail and sometimes we're about to end up in the tiger's stomach.

Change brings new complexity, new challenges

The firm is evolving from a fast-paced entrepreneurial start-up to a combination entrepreneurial/professional corporation hybrid. Smaller traffic impact studies have given way to larger, more complex design projects. Management has also necessarily increased in complexity from project level to team, group, office, and operational/administrative levels, all governed through our senior management group. Administrative support now requires separate marketing, accounting, human resources, and information systems functions.

Financial management and banking relationships have also increased in importance because of our growth. And capital financing and line of credit management offer us new opportunities and decision-making challenges.

Quality and dedication remain constant

The one constant, however, has been the quality of the people who work at McM and the clients we serve. Dedication to clients, both internal and external, is outstanding. The "can do" attitude that permeates the company is inspiring. The eagerness of our staff to do it all and face new challenges allows us to look toward our future with great anticipation, as we work together to serve our clients, tame the tiger, and continue to experience positive growth.

National News

Looking Ahead to 2003: Reauthorization of Federal Surface Transportation Policy

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

Part One: The Need for Reauthorization

Since inception of the federal aid highway/transit programs, two laws have had a major impact, establishing the need for Congress to decide on reauthorization in 2003. The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and 1998's Transportation Equity Act for the 21st Century (TEA-21) have changed federal surface transportation policy in three major ways. The two laws:

- **Provide state and local governments with more control over federal funds.**
- **Make funds available to an expanding range of qualified activities.**
- **Increase the amount of money invested into the program.**

While ISTEA and TEA-21 brought much-needed aid to the transportation system, they also caused some problems. For example, the changes they made to the Federal Aid Highway Program, combined with inflation, reduced the overall level of transportation improvements. Also, by linking the two laws, people opposed to expanding roadway capacity have found ways of slowing programs by mounting litigation against them.

Road quality and job security are key issues

The 2003 reauthorization may address issues such as the deterioration of roadway systems, which causes an estimated 15,000 fatalities a year; roadway congestion and high capacity, caused by the 72 percent increase in the number of vehicle miles traveled; and the "poor" or "mediocre" condition of 28 percent of all arterial road miles in the U.S.

In 1999, the United States Department of Transportation took these statistics into consideration. The department reported to Congress that a yearly budget of \$50 billion would be necessary to maintain the existing highway system — new improvements would require at least \$15 billion more per year. But with improvements to all publicly-funded roads and bridges combined estimated at \$1.4 trillion and considering that publicly-funded highway construction is responsible for almost 2.2 million jobs, this is an investment well worth U.S. protection.

Changes to existing policy are a near-future necessity, not only to maintain and improve the mass transit system but also to safeguard the employment of over two million people.

See the next issue of McMahon In Motion for **Part Two: Recommendations for Reauthorization**, suggested by transportation industry experts throughout the nation.

Surveying Steps into the Electronic Age

By Janine M. Cocker, Marketing Coordinator

Our Services:

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McMahon in Motion is edited and designed by:



Word Work Communications
www.wordwork.com

Innovative technology has brought the art of surveying a long way. Less than 20 years ago, a topographic survey called for a three-man crew to take field measurements and then plot survey data laboriously by hand. Collection of distance measurements required a crew to tape roadways — a time-consuming process which was subject to human error and inherently dangerous.

Today, horizontal, vertical, and slope distances are gathered through electronic equipment such as Leica's Total Stations, which integrates data collection with built-in measurement devices. Defining existing conditions is now a quick process, reducing the need for surveyors to step into the path of the motoring public. Surveyors point the instrument at the target, and obtain location and elevation measurements with the push of a button. The information is downloaded into a computer and software automatically connects the points, generating a complete image of the land surface.

ROW remains a challenge

Despite advances in technology, determining right of way (ROW) remains one of the most challenging issues facing professional land surveyors. State-of-the-art equipment may be able to measure angles, distances, lines, and elevations, and can indicate centerline grades, drainage, sanitary sewers, buildings, sidewalks, and poles, but it cannot identify ROW or easements.

Also, since roads can be subdivided



Surveyor Ernie Christman performs sight distance measurements at six-points intersection in Whitpain, PA.

and property ownership transferred numerous times over the years, boundary lines and ownership rights further complicate defining ROW or easements. Surveyors must resort to researching through deeds, plans, and public record documents to first locate property boundaries and then determine ownership.

New survey chief brings experience

Thurman Golightly, PLS, Chief of Surveys, has over 30 years of surveying and construction experience, including the skills to address ROW challenges. Mr. Golightly heads the firm's new survey department, providing topographic and land survey services, and construction layout. Handling projects such as Towamencin Avenue and Troxel/

Orvilla Roads in Towamencin Township; S.R. 0073 (Skippack Pike), including four intersections in Whitpain Township; and Home Depot in Westfall Township, our survey department has already measured up!

New Projects — Mid-Atlantic Region

- **Approximately 4 miles of Roadway Improvements** on Skippack Pike (S.R. 0073, section MG1), Whitpain Township, PA
- **Traffic Engineering Consulting Services** Radnor Township, PA
- **Survey and Conceptual Improvement Plans**, Erickson Retirement Communities, Warminster Township, PA

Boston's Downtown Transit Improvements: Underway But Not All Underground

By Mike Clements, Project Manager

Transit was born in Boston with a ferry system started in 1631. America's first subway opened here in 1897. Today, the Massachusetts Bay Transportation Authority (MBTA, also known as the "T") moves approximately 1.2 million riders daily. Of these, 673,000 use the subway, 363,000 ride buses, 129,000 take commuter trains, and 4,600 travel by ferry.

To keep up with increasing transit rider demands, the "T" is continuing to expand and enhance its services in the Greater Boston area. Read on to learn more about some key downtown projects currently underway.

Proposed Bus Rapid Transit (BRT) service: The Silver Line

The proposed Silver Line bus service will provide a one-seat ride between Dudley Square and Logan Airport, linking downtown Boston and South Station. When completed in 2010, the new service is anticipated to serve 60,000 riders daily. Each bus will carry 120 passengers and make 30 trips an hour, with only two minutes headway between buses during peak periods.

A Global Positioning System will track buses and provide up-to-the-minute schedule information to "smart" kiosks, digital message boards, and public address systems at Silver Line stations. The first leg of the BRT will run in an exclusive lane on

much of Washington Street, portal into a tunnel near the New England Medical Center, and finally emerge at D Street in South Boston to access the Ted Williams Tunnel and Logan International Airport.

The second leg will connect South Station to the South Boston Waterfront via a mile-long tunnel, with two new Silver Line stations. The route will continue above-ground to the Convention Center and other waterfront destinations, then travel through the Ted Williams Tunnel to Logan Airport.

Finally, a tunnel will connect downtown with South Station via Boylston Street and Chinatown, with transfers to the Orange, Red, and Green subway lines, commuter rail, and Amtrak at South Station.

Gary McNaughton, P.E., Senior Project Manager of McM, has worked with the contractors on the Washington Street reconstruction project to provide construction staging and traffic control plans. Bill Steffens, Associate and General Manager, has worked with the "T" to develop the Silver Line project's financial plan.

"Super station," tunnel, and viaduct in construction

A new underground station for the Green and Orange Lines is going up

near Canal Street, across from the Fleet Center. The station will provide easier access and transfers

between the Green and Orange lines, and will include a convenient, safe underground walkway to the North Station platforms and the Fleet Center.

Meanwhile, construction moves ahead on the new Green Line tunnel and viaduct connecting Haymarket and Science Park Stations via the Fleet Center. The old elevated Green Line tracks and structure over Causeway Street will be removed, greatly improving the area's appearance.

Night Owl pilot program

Plans to offer late-night bus service on Fridays and Saturdays have been finalized. The new Night Owl plan will meet the needs of transit-dependent people who travel after regularly scheduled trains and buses have stopped for the night. Ten new routes will use the same travel corridors as the rapid transit lines, and each stop will display a logo to let riders know where to catch an after-hours bus.



New Projects — New England Region

- **Traffic Assessment Study**
Costco Wholesale, West Springfield, MA
- **Final Environmental Impact Reports** (transportation section), two Shaw's Supermarket locations in Walpole and Mansfield, MA
- **Traffic Evaluation** on Daggett Drive, for Costco Wholesale, West Springfield, MA

Florida Regional News

Growing City Takes Action to Maintain Park-like Setting

By Joe McMahon, President

Some say it's the fastest growing community in Florida, and perhaps the nation. And the rumors could well be true — the City of Parkland, located in the extreme northwest corner of Broward County, has grown rapidly in recent years.

In the 1960s, Parkland was characterized by "The Ranches," properties of three, six, nine, or more acres, most of which had horses or cattle. Parkland remains a very livestock-friendly area. The Everglades,

located to the north and west, further contribute to the rural feel. While the city prides itself on its park-like atmosphere, the close proximity of Fort Lauderdale has spurred Parkland's growth. (For more information on the Everglades, see the spring 2001 issue of McMahon in Motion, available online at www.mcmtrans.com.)

Meeting traffic challenges

Maintaining a park-like setting with the

onset of rapid growth is fraught with transportation challenges. From a purely transportation perspective, city officials want to maintain a low level of traffic volume. Many in the community also favor the concept of boulevards with overhanging tree canopies. Combining these goals, the emphasis is on providing greenways with a minimum number of through lanes, allowing separate turning lanes at intersections.

Putting their desires into action, Parkland

New Projects — Florida Region

- **Roadway Improvement Design Project** on Atlantic Boulevard (SR-814), City of Pompano, for Florida DOT
- **Traffic Engineering Consulting Services** for the City of Parkland, FL
- **Minor Design Contact Extension** for District Four, Florida DO

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.

Question (from previous issue): The United States' most efficient mode of medium-length intercity travel is Amtrak's Acela Express, a moderately high-speed train that travels at speeds up to 150 mph. What high-speed rail line system is among the world's most advanced transportation technologies, allowing speeds to exceed 240 mph?

Answer: Magnetic Levitation (Maglev) is the high-speed system that could efficiently and quietly travel between Baltimore and Washington in 17 minutes at speeds exceeding 240 mph. At full implementation, the system of vehicles will complete 35,000 trips daily. This intercity travel alternative could eliminate more than 30,000 vehicles from congested roadways every day. The Baltimore-Washington Maglev (expected to be fully operational by 2010) could be the first leg of a larger system connecting other eastern seaboard cities from Boston to Charlotte.

Next Question: In what year was the Highway Trust Fund created?

- A) 1948
- B) 1952
- C) 1956
- D) 1960

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

Growing City Takes Action to Maintain Park-like Setting

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officials have decided that its main east/west thoroughfare, Holmberg Road, be retained through much of the city as a two-lane roadway with greenery on either side. The city also actively implements traffic-calming measures to maintain the rural residential flow of the community.

McMahon makes a difference

In 2000, to achieve traffic control, the city engaged McM to design a roundabout at Holmberg Road and Parkside Drive, which is in place today. In July 2001, Parkland officials appointed McM as their transportation consultant, with the charge to complete a comprehensive citywide transportation study. The study will evaluate alternative solutions to the city's needs through the 2020-2025 timeframe. Transportation analysis will develop a network to respond to the community's needs while minimizing through lane construction and traffic control devices, particularly traffic signals.

With initiatives such as traffic calming and a citywide study in effect, Parkland's residents' desire to maintain their park-like community is constantly being enacted. McM is proud to help the city make these goals a reality.

Did you know?

Massachusetts Bay Transportation Authority, the nation's oldest and sixth largest transportation system, established America's first subway. As early as 1897, the Green Line carried passengers through downtown Boston from Park Street to Boylston Street.



At right, the 2001 Green Line route.

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