

Ralph J. Stephenson, P.E.:

# The Thinking Man's Consultant

by E. Dewey Little, Contributing Editor, CAM Magazine

*Within the construction industry a gulf often separates the academic world from the business world ... but there is a notable exception - an engineer who merges both worlds.*

For 47 years, Ralph J. Stephenson, P.E., Mt. Pleasant-based consulting engineer, has lent the construction industry the power of his analytic mind. He continues to guide construction starts and, when necessary, he helps rescue troubled projects.

Known to many as "Mr. Construction," he serves both as an engineer consultant for clients and a teacher and mentor of young construction professionals.

Stephenson bridges the gap between academia and hands-on construction knowledge on his many projects throughout the U.S., as well as in Canada and Mexico. But like many unsung heroes, rather than talking about himself, he prefers to explore concepts, attitudes and construction concerns in his own inimitably logical way.

While his work is systematic and precise, his success as a problem-solver often has a Houdini-like quality. Much of the magic he brings to construction projects probably springs from his inborn curiosity about technical matters and "why things work in certain ways."

Of Scotch/Irish heritage, Stephenson was raised on Detroit's west side and later in Highland Park. His father, "was the fastest telegrapher in the United States," he noted, "and the co-developer of the second two-way police radio system in the country."

## Discipline of Music

From his earliest years, Stephenson's life was enriched and strengthened by the discipline of music. "What music teaches you is that every time you go on stage or down to the pit," he said, "you have to be

good. If you make a mistake, there's no place to hide. Nobody cares how good you were last week or how good you were last night. It's how good are you going to be this evening."

Stephenson believes that if you build something poorly that doesn't meet the owner's needs, you can't bury your head in the sand. "That's a very important set of proofs for disciplining your activity," he said. "Like the military or college, music is a discipline that doesn't allow mistakes."

He continues to play the trumpet, which he keeps near his desk. His music lessons began in the sixth grade and lasted throughout his college days.

While attending Highland Park High School, he started the school's band. Later, Stephenson won a musical scholarship to Lawrence Institute of Technology (now Lawrence Technological University). He believes "that might have been the only music scholarship they ever awarded."

He joined the musician's union by age 18 and played at the Detroit Yacht Club, DAC and with other dance bands around Michigan. With evident pleasure, he recalled playing third trumpet with a band at the Traverse City Cherry Festival in 1940. Later, Stephenson played in the Detroit Symphony Orchestra.

His music helped him pay for his engineering degrees, the first being a Bachelor of Science in mechanical engineering from Lawrence Institute of Technology. At that time "my first thoughts were to be a contractor," he said, "but after looking at engineering, I decided I would have to learn a lot about technical matters before I would consider I was a competent contractor."

Following World War II service in the Corp of Engineers, Stephenson discovered a dismal lack of available jobs. Encouraged by his girlfriend and future wife, Betty, he attended Michigan State University and earned a Master of Science in civil engineering.



## 1995 Mister Construction

*Ralph J. Stephenson, P.E., is a Mt. Pleasant-based consulting engineer. He also a very active member of MSPE.*

## Commitment to Engineering

By this time, Stephenson had committed himself to the engineering profession. He joined Smith, Hinchman and Grylls in 1948, where he credits the late Warren Yee as being his mentor (Yee later bought the Harley, Ellington firm). "He taught me practically everything I know about working as a structural engineer," he said.

Stephenson married Betty, his childhood girlfriend, in 1948. In that partnership, they raised three children in Detroit. As a husband-and-wife team, they have worked together for about 32 years. She serves as the firm's secretary-treasurer, does all his scheduling, makes the appointments and handles the travel arrangements.

Five years ago, the Stephensons moved from Detroit to their Mt. Pleasant home and office, nestled along the wooded banks of the Chippewa River.

Tracing their daily routine, Betty said, "We're up by 5 a.m. every morning and we're in the office by 6:30. Then he often works until 6 or 7 o'clock at night." Explaining her husband's zest for project problem-solving, she said, "He loves his work so much that to him it's not work."

"When he's tired and feeling overwhelmed he'll take an evening off to read. He loves science fiction and murder mysteries. He finds that detective stories offer some answers that he can apply when he's in meetings. He has to be a detective in some meetings to figure out the best answers to construction problems."

## Father of CPM

Construction industry acclaim came to Stephenson as early as 1963, when he was a forerunner in the critical path method (CPM) and developed most of the techniques that are being used today. He later co-authored a college text "Critical Path Method," published by Cahners in 1967.

About 20 years ago, when CPM was still in its infancy, "Ralph came in and walked us very tenderly through assembling a CPM," said Ron Hausmann, president and CEO of Walbridge Aldinger. "I was just a junior engineer here at the time and we were bidding a job - Southfield IBM Building - that required an automated schedule."

"Before the estimator and the superintendent put together a type of bar chart for scheduling...it was more luck than knowledge and intellect."

"When Ralph showed us CPM, I was astounded by how simple and all-encompassing a tool it is."

Today Stephenson is disappointed in the application of CPM, because he finds "the use of project planning and scheduling is abysmal. It started 32 years ago, and today CPM is at its lowest level in terms of the end product."

Too often he feels people have lost touch with their projects. They believe a computer creates the CPM program for them. He believes "that's the worst thing in the world they could say, because a computer doesn't do CPM...people do CPM."

Stephenson coaches people to maintain a personal touch in molding the project by using their own personal experiences and abilities.

## Partnering Process

Undaunted by abuses of CPM, he still pursues a thinking man's approach to solving construction problems. This has led him to develop and champion the partnering process in construction projects, an upstart concept that Stephenson once cautioned against. He warned of some of the risks involved "but I later ate my words."

He now firmly believes in a partnering process in which all parties to a contract participate under mutually planned and shared rules of participation and conduct. His approach to a partnering format requires thought and hard work by participants...but it pays off in above average project results.

Typically, Stephenson helps project clients develop their own mission-and-objectives charter. He serves as a analyst and coach as they work through the process. "The people on the job should do the partnering work," he contends.

He also helps them work through an early evaluation system to check current progress against predetermined goals. Step Three, they have to develop and implement an alternative conflict resolution system. Then they implement and maintain a multi-item report card system through the life of the project.

One of his most prominent partnering projects is the \$400 million Detroit VA Hospital. "It has turned out beautifully," he said, "and kept the job out of a lot of trouble."

With some 32 partnering contracts under his belt, Stephenson is still going strong on promoting good beginnings for construction projects. To capture his experiences in print, he has just completed a book, "Partnering," soon to be published by John Wiley & Sons, New York.

## Management Seminars

Although Stephenson doesn't consider himself to be a teacher, many of his industry clients think he is. So do those who have attended his technical and management seminars in the United States, Canada, and Europe.

In 1984 he was asked to be a fill-in teacher at the University of Wisconsin, and he's taught there ever since in professional development for the department of engineering. He now teaches classes at the

university 10 days a year.

Perhaps he began his commitment to teaching future generations of constructors in 1963, when he joined Bill Dennis and John Mass at the Builders' and Traders' Exchange of Detroit (now Construction Association of Michigan) to spearhead the growth and development of their Institute for Construction Management (ICM).

As director of ICM, Stephenson designed the curriculum based on his sensitivity to the most needed construction industry courses that were not otherwise available. If there were ongoing programs that served a course need, he let them alone.

His personal efforts have also led to finding ICM instructors with practical experience and helping his teachers develop course content that encourages thoughtful solutions to problems.

"He borders on genius," said Curt Hacias, president of CAM. "He is the man most singularly responsible for the success of the Institute for Construction Management these past 30 years."

Insight about Stephenson's success as a teacher comes from Marla Janness, who worked with him as manager of education at ICM. "He is single-handedly responsible for the continuity and high quality which has been a hallmark of ICM over the years," she said. "Ralph is an excellent teacher. We have students take classes simply because he is the instructor. And they are never disappointed."

"Students are impressed with his experience and breadth of knowledge. And while he's teaching construction, he always manages to convey his sense of fairness, his integrity."

She believes that one of the reasons he is such a good teacher "is that he constantly strives for excellence in the development of course content, and in his presentation skills and methods."

"I wish every young person in the construction business could have an opportunity to experience a mentoring relationship with someone like Ralph."

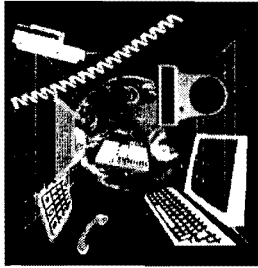
"In addition to sharing technical expertise, Ralph has been a coach, a model for decision-making, an example of high standards. Having a mentor like Ralph certainly makes one want to achieve nothing but the best!"

**Stephenson — Continued on page 12**

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**Stephenson — Continued from page 11  
A Forward Look**

Perhaps a visionary, Stephenson has talked about developing a construction industry campus. His dream has always been to have an environment for teaching hands-on application of construction management skills.

Many consider Stephenson to be both teacher and mentor, including five to 10 young people in construction he offers instruction to every year. His wife said, "He's never turned away anyone with a problem or in need of help in finding a job. He always does whatever he can to help them. That's an ethical and moral standard he lives by."

He credits his daily bible reading and prayers with keeping him focused on what he can do for others.

**Group Ability**

Close friend and colleague Donald C. Templin, P.E., Livonia-based consulting engineer, said "Having him as a consultant on your project is a learning experience. Ralph is the teacher from whom you gain a lot more than just solving some problems."

"He reaches out in problem analysis with work that's very provocative and ahead of it's time."

Another thing that stands out about Ralph Stephenson, according to Templin is that you need to work with him as part of his team. "He draws upon everybody

during discussions, but you have to want to be a contributor and work right along with him."

"He's very good at extracting ideas and problems out of the people. His integrity, honesty, kindness, and particularly, his sensitivity in dealing with clients and contractors stands out in every meeting."

As a man who's in demand and doing what he wants to do, Stephenson doesn't see any advantages to retirement. His current workload consists of about 32 active projects.

"Every time you finish a job," he said, "you're done with it. So essentially you're fired five or six times a year. If nobody hires you, you're out or work."

Over the years, to counteract the job-hunting syndrome, he has kept a backlog of 20 to 30 jobs. One of his revived interest is in benchmarking can be of great benefit to construction."

He explained that benchmarking is far more than just comparing performance. It involves a complex study similar to CPM, but probably on an even higher level of technical application. But he has helped clients institute benchmarking with ease.

**Future Plans**

Stephenson has already started writing a book on construction management and has outlined a much needed book on job satisfaction. He finds people today are dissatisfied at their work, and that bothers him. Through his book, he will explore why people are dissatisfied at work and what they can do to restore their interest.

Both as construction management innovator and as trouble-shooter, he finds one of the biggest causes of job problems is mental laziness. He can list projects in which this trait has cost the owner millions of dollars in extra expense.

With all of his projects, Stephenson provides the analytical framework and guidance that helps people think through the process and rationally resolve any problem. For over 40 years, Stephenson has helped the industry build a stable foundation for project success. His gift as a consultant, mentor and clear thinker has made him an integral and irreplaceable part of the construction industry. ◀

*This article originally appeared in the October 1995 issue of CAM Magazine.*

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