FAST TRACK CONCRETE PAVING

John McChord

The American Concrete Pavement Association, working in conjunction with (and continuation of) a pioneer effort in the state of Iowa in the mid-1980s, is chiefly responsible for the development of Fast Track Concrete Paving as we know it today.

Fast Track Concrete Paving has been defined in several ways. Most simply put, it is "Pave today, open tomorrow" or "Pave today, open today" in certain cases. "Get in, get the job done right, get out, and stay out" is another phrase I've heard recently in describing the fast-track approach. This matter requires the utilization of materials, equipment, and construction procedures that permit opening of the roadway as soon as possible while still providing a surface that will eliminate future lane closure for maintenance and repair.

To describe fast track in more detail, it is a blend of the most complete and up-to-date knowledge of concrete materials and concrete paving technology into a process designed to provide the highway industry with a long-lasting concrete pavement with minimum delays. It is not, nor was it ever, intended to be a resurfacing technique only. Its application is broader, extending into new construction and reconstruction as well as resurfacing.

What is Fast Track's history? Why, when, where, and how was it conceived? What has transpired since its inception to the present day? Does it have a place in Kentucky's paving market? If so, where and when? These are questions to be addressed in my discussion with you today.

In the '50s, '60s, and '70s, the concrete paving industry had a good share of the major highway paving market both nationally and in Kentucky. The Interstate and parkway systems and other major primary routes were in the construction stage. This construction was off the beaten path of the traveling public, in virgin territory. Concrete paving spreads could take all the space needed to construct these new pavements and time of opening to traffic was not a major issue. In fact, states' specifications told the contractor to stay off the constructed pavement 5-14 days. Mix designs were established accordingly and high strengths were not required. A minimum 3500 psi compressive strength in 28 days was a generally acceptable strength.

After graduating as a civil engineer from the University of Kentucky, John E. McChord worked with the Kentucky Department of Highways for 30 years until he retired in 1988. Since November 1988, Mr. McChord has been Director of Engineering for the Kentucky Ready-Mixed Concrete Association, assisting in the promotion of cement concrete products and providing technical assistance throughout the Commonwealth.

November 1-2, 1990
Then the picture changed. The Interstate and parkway system was largely completed and the need shifted from one of new construction to need of maintenance, upgrading, or rehabilitation of the existing system.

The concrete paving industry found itself at a tremendous disadvantage in competing with the asphalt industry in this type of construction in which early opening to traffic and maintenance of traffic under construction became the main issues.

The resulting dilemma created the need for concrete paving contractors to get together with equipment manufacturers and others to map out a strategy for fast track concrete, which included equipment, materials, and various construction techniques.

A group of industry people in Iowa coordinated an effort with the Iowa DOT in the development of a concrete fast-track package and a pilot project was set up and construction began in the summer of 1986.

Since that pilot project, which drew the attention of the industry and transportation engineers nationwide, the concept has gained continual momentum. Some dozen states or more have in one way or another implemented fast-track projects.

The Kentucky Transportation Cabinet has developed a Special Note designated as "Portland Cement Concrete Pavement 24/48/72 (Experimental)" to cover certain aspects of this type of construction. Three projects are imminent utilizing this concept in one way or another. These are:

1. A Boone/Kenton-counties project using a cement concrete overlay over an existing approximate 3-mile section of I-275 near the Greater Cincinnati Airport. This project is under contract.
2. A Hardin County I-65 weigh station project, which calls for total reconstruction of the existing pavement. This project is under contract.
3. An intersection reconstruction project in Glasgow, now scheduled for a November letting.

These will all be very important projects to the cement-concrete industry in Kentucky. Additional experiences in Kentucky with fast-track concrete are street projects in the city of Henderson and experimental private projects.

With the built-in premium strengths and other properties of a concrete pavement using the fast-track approach, the future of the concrete industry is bright and is destined to play an important role in Kentucky's economic growth and success in the future.