INTRODUCTORY REMARKS FOR GREEN RIVER BRIDGE OVER WESTERN KY. TURNPIKE

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This hour of the general session is to be devoted to the "Green River Bridges on the Western Kentucky Turnpike." However, before we get into the assigned subject, I thought it might be of interest to give you a little background information on the Western Kentucky Turnpike as described in our engineering report.

The Western Kentucky Turnpike was conceived as part of a system of express highways designed to serve the entire Commonwealth of Kentucky by offering adequate modern highways through all sections of the state. This toll road will be a boon to western Kentucky. It is certain to attract new and fresh industrial and commercial life to the state. This in turn will generate jobs, which will give a boost to employment in the state thereby improving substantially the western Kentucky economy. Other benefits will also be enjoyed from increased travel, both tourist and commercial, from our neighboring states.

Kentucky Lake has long been a tourist attraction for Kentuckians as well as residents of other states. Chemical industries have located below Kentucky Dam creating a thriving industrial complex, and the Atomic Energy Commission's plant near Paducah has been operating for several years. At the present time Barkley Dam is under construction on the Cumberland River and, when complete, it will further enhance this area to the tourist and industrialist. The Turnpike will greatly improve the accessibility of this region, and further; will orient it toward the other industrial and commercial centers within the state.

The Western Kentucky Turnpike extends 127 miles from a point west of Princeton on State Route 278 to a connection with the Kentucky Turnpike at Elizabethtown. It will provide a four lane limited access connection between the rapidly developing industrial and recreational areas of Western Kentucky and the more populous center of the state. The western terminus of the road was set at Princeton for this project because the specific location of Interstate Route 24 had not been determined. The eastern terminus was set at Elizabethtown to connect with the Kentucky Turnpike and I-65.

Access is provided at nine points along the route with three toll plazas. The collections of tolls will be accomplished by barrier type toll plazas located under the cross road over structures, so as to intercept entering, existing, and through traffic with a single plaza. Six traffic lanes will be provided, with the two outside lanes being manually operated, and the four inside lanes being equipped with automatic facilities.

For this project, the consulting engineer and authorized engineering representative of the Department is the Brighton Engineering Company, with Michael F. Rudloff assigned as Project Engineer. Reporting to the consulting engineer are nine section engineers, each furnishing the engineering services for the design, detail and construction supervision for a particular construction section of the Turnpike. They are as follows:

1. Hurst-Rosche
2. Johnson, Depp and Quisenberry
3. Harry Balke Engineers
4. Carl P. Kroboth Engineers
5. L. E. Gregg & Associates

6-1. C. J. Fuller
6-2. Preston & Associates
7. H. A. Spalding
8. Adam K. Grafe & Associates

For the benefit of those especially interested in structures, no rigid policy was established to control the selection of the type of structure except that each structure was to conform to the overall alignment and gradient controls for the Turnpike. For grade separation structures and small stream crossings requiring openings larger than box culverts, preference was given to simple or continuous concrete "I" beam construction. Piers in general are open frame construction consisting of concrete columns and caps with cantilevered ends. Abutments are either spill through type or pile bents depending upon the foundation conditions existing at the site.

Criteria for the control of the design and construction of bridges were developed from the standard practices of the Kentucky Department of Highways.

Some statistics on the Turnpike may be of interest:

There were 27 grade and drain contracts on the entire project having a contract value of $43,106,000, including 73 bridges, one of these being the Green River structure. The last two grade and drain contracts included paving in order to expedite the projects. To date, the grade and drain contracts, including structures, are about 85 per cent complete. The first grade and drain contract was let in November, 1961, and since that date, twelve of the 27 grade and drain contracts have had the final inspection.

There are 16 paving contracts having a value of $25,600,000, awarded to seven different paving contractors. Paving is expected to start on or about May 1, 1963. Some of the contractors have indicated that they expect to put down dense graded material about April 1, weather permitting, and all contractors are presently stock piling materials.

Returning to the subject at hand, namely the Green River Bridges of The Kentucky Turnpike, I give you Carl P. Kroboth, Consulting Engineer here in Lexington, Kentucky, the designer of the Green River Bridges.