

Issue: Southeast Edition

Rolling Roadblocks Maintain Traffic Flow at TN Job Site

By Gwenyth Laird Pernie

Reconstruction of 1.9 mi. of the I-40/I-240 interchange, located in the western part of Memphis (referred to by locals as Midtown) is currently under way. This \$53-million project was, at the time of its letting, the state's largest single road contract and is considered one of the most complex road projects in Tennessee's history. General contractor for the project is Ray Bell Construction Company in Brentwood, TN, with Jimmy Turner leading the way as Bell's general superintendent at the job site.

According to John Long, superintendent of Ray Bell, subcontractors include Memphis-based Ferrell Paving (concrete paving, grading and drainage), APAC-Tennessee (asphalt paving), Shelby Electric (electrical work), HD Construction (bridgework), and ILM Company (interstate landscaping).



Designer for the project is Stan Klenk, civil engineering manager of Allen Hoshall Inc. of Memphis, TN.

According to Klenk, the I-40/I-240 interchange design phase of the reconstruction began in 1987, resulting in preparation of an Environmental Impact Statement (EIS) and ultimately construction plans, which were bid in Spring 2003.

"When the interchange was originally designed and built in 1964, I-40 was to pass directly through the Memphis Overton Park, while I-240 was to serve as a loop around the city," Klenk said. "However, litigation due to environmental issues and the handling of an adjacent historical corridor stopped construction of I-40 east of the interchange and it was never finished."

As traffic has increased, the interchange has become overburdened and many accidents have happened.

"One in particular was in 1988 when a propane tanker attempting to cross the eastbound ramp, merged from I-40 to I-240 and crashed and exploded, resulting in a fiery blast that killed eight people," Klenk said. "This accident emphasized to the Tennessee Department of Transportation [TDOT] the importance of moving forward with the project both for safety and traffic flow."

According to Klenk one of the first phases of the project was to demolish 16 of the old bridges, numerous ramps and other structures all built in the 1960s. "So far we have demolished six bridges," Klenk said. "The rest are being used for temporary traffic control and to get around the job site and will eventually be demolished."

Seven new bridges will be constructed out of steel beams and concrete decks.

"In all we will build 21 retaining walls, as well as noise walls — which are primarily to accommodate the historical corridor and residual areas," Klenk said. "In addition we will be setting up 23,000 meters of barrier rail."

He said the reconstruction also includes the replacement of one-way ramps on I-40 with two-lane throughways on the interchange.



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According to Fred Clayton, Ray Bell project manager, approximately 140,000 tons (127,000 t) of asphalt will be used on this job.

"One of the most challenging features of this project is working within the constraints of a very small construction site. The trick has been to maintain traffic through the area, keeping in mind that there is no way to detour traffic, and maintain a work schedule at the same time," Klenk said. "Ray Bell has done an extremely good job in managing the traffic and insuring a safe work zone for the workers."

This has been accomplished with the use of rolling roadblocks, something Klenk said has not been used a lot in Tennessee. The blocks are used primarily when traffic needs to be closed on a limited basis, such as when crews are placing beams.

In those cases, traffic is slowed, but never comes to a complete stop.

According to Long, equipment on the job has included cranes, dozers, crawler loaders and excavators, including a Cat 322C and Cat 325C equipped with both buckets and demolition tools.

"There are approximately 30 Ray Bell employees at the job site daily, along with another 20 to 30 subcontractor employees," Long said.

Klenk said the construction project not only will improve traffic flow on 1-240 and I-40, but also on local roads that feed into the interstate system.

Construction began in May 2003 and is expected to be complete in May 2006. CEG

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