

OPE 18-22

# State Witness Attacks Overton Tunnel Proposal

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A state witness in the Overton Park expressway case today attacked the plan of a Memphis architect to tunnel the highway beneath the park.

George D. Barnes, manager of the Mid-South division of Buchart-Horn engineers, said the tunnel would require more right-of-way than the present depressed route. He said the plan proposed by Roy Harrover, president of the Memphis Chapter of American Institute of Architects, would lower the highway considerably and there-

fore require more right-of-way.

Barnes said the deeper a highway is to be depressed, the wider the swath of land needed to keep the earth from collapsing. He also attacked the safety of tunnels:

**"Tunnels, in engineering viewpoint, are used in extraordinary circumstances, such as to get around natural barriers, such as mountains and rivers. Tunnels are used when only absolutely necessary. They are not safe as the open road. They tend to confine the persons — the walls on the side and the ceiling above the head."**

Barnes cited the tempo-

rary blindness of motorists entering or leaving tunnels. "There is a moment or a second of time when the motorist is blinded . . . when he leaves the natural light and enters the different illumination of the tunnel," he said.

Barnes said accidents within a tunnel, or even a stalled car, could create havoc. He said drivers entering the tunnel would have no idea of this problem in the middle of the tunnel.

**Emphasizing the engineering problems, Barnes said if a tunnel were burrowed beneath the park, not only would the right-of-way be wider but unsafe retaining**

walls would have to be built. He said his firm discouraged the use of the walls.

He added that the shoulder inside the tunnel would be only four feet compared to 10 feet outside.

Barnes said an elaborate pump system would have to be maintained "forever more" if the tunnel were built as proposed by Harrover. He said the water from the area would have to be pumped to Lick Creek and then over the expressway some way. Pumps also would be needed to pump water out of the expressway, he said.

The state attorney, J. Alan Hanover, has said repeated-

ly that if the tunnel were built, all the water falling on the entrances of the tunnel would rush to the bottom of the expressway, possibly flooding it.

**Harrover said the pollution in the tunnel would be eliminated by fans blowing out the stale air in a concentrated form. The state witness testified that if this plan were followed, towers would have to be built because the concentrated pollution must be blown above the park.**

Barnes also disagreed with the contention of the objectors that the expressway would be outdated by 1985.

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He said that the firm designed the highway with standards which would make it sufficient for a long period of time.

Barnes was expected to be cross-examined this afternoon by Charles W. Vardaman of Washington, D.C., and Michael Lackner, attorneys for the plaintiffs.

Barnes, whose firm did the actual design work on the expressway, testified that the Tennessee Highway Department had gone beyond its recommendations and "taken additional steps to insure the minimization of harm to the park."

Barnes, a graduate engineer of the University of Florida who has worked as a landscape designer in his father's firm in New York and New Jersey, was the state's third expert witness yesterday afternoon. It was the 15th day of hearing in the suit brought by objectors seeking to block construction of Interstate-40 through Overton Park.

The case resumed today before U.S. District Judge Bailey Brown.

**Barnes said his firm had**

recommended that an interchange be removed almost entirely from Overton Park to further minimize harm and the state had agreed to this. Thus, he said, the interchange, at East Parkway, now is proposed to have only one ramp in the park.

"Did this reduce the amount of taking (of park land)?" asked Hanover.

"Yes," said Barnes, "it reduced it from 8.1 acres to 1.9 acres."

The objectors have contended that the state should have moved the East Parkway interchange to the Hollywood area to further reduce harm.

But Barnes said his firm's survey of studies conducted by Harland Bartholomew and Associates, the planning firm that laid out the expressway system for Memphis in 1955, indicated "there was no place to put the interchange to serve the public other than at East Parkway."

Barnes said that in the survey of the Bartholomew studies his firm found the Bartholomew reports to be "accurate" and to "predict the population growth and trends of Memphis" reliably.

"Did your firm ever make

any studies about relocating the route out of the park?" Hanover asked. Barnes replied:

"I have no record of any studies being made out of the park but we made studies in the park. The primary purpose of our studies in the park was to determine the disruptive effect to the park in order to do the minimum amount of damage to the park."

Barnes said after his firm completed its study in 1969, the state "depressed (the highway) more than it was then.

Judge Brown asked about a possible siphon for Lick Creek.

Barnes said engineers do not recommend such mechanical systems under the Lick Creek circumstances.

Barnes said that "in a park area tree leaves and debris fall into a siphon and the siphon would have to be cleaned out and traps built." Barnes said if the drainage area got stopped up it would cause overflowing in the park area and the zoo.

Barnes said if a non-mechanical siphon system were used, part of the park would have to be dammed and a lagoon formed. He said this would take more park land — perhaps 26 to 31 more acres.

**Harrover had proposed** that the park expressway be depressed in a tunnel, like the one he designed on Winchester for Memphis Airport, and be mechanically pumped.

Barnes said the Winchester drainage system "draws" from an area of about three acres while the Lick Creek area of the park would draw from an area of about 46 acres."

Barnes said that his firm's study of the Abe Plough route, which would run north of the zoo and take land from its northern edge along Parkway, and a similar plan that would go along the same general area as the Plough route but dip southwardly to allow for zoo expansion, both would take more land from the park than the present Interstate-40 route.

"The approved route takes the smallest amount from the park, 21.1 acres, and our study showed that the Plough plan would take from 27.0 to 33.7 acres and the other route similar to the Plough route would take 23.3 acres."

He said the Plough plan would have called for a relocation of all or part of the zoo and "could have actually evolved a further reduction of 32.8 to 39.5 acres than the approved route."

**Earlier, international zoo planner Robert Everly testified** that he visited the Memphis zoo in 1961 after being contacted by Plough, but did not draw up a zoo master plan. He said the zoo was in terrible condition. He returned in 1968 after being hired by the state highway department and concluded that the zoo master plan was "good" but that the zoo "had to be completely rebuilt."

Everly discounted the testimony of Robert Mattlin, Memphis zoo director, that the park expressway would disrupt the breeding habits of some of the animals, especially the bears. He said the poor breeding record at the Memphis zoo was due to the terrible condition of the bear pits.

**When asked if he studied** the effects of pollution on zoo animals, he said no but added that the Milwaukee zoo

with an expressway nearby had the opposite experience with mooses.

Everly said: "Milwaukee is the newest modern zoo in America. They have a moose exhibit. Now moose are probably the most skittish of all the hooved animals, and they have this exhibit adjacent to a thoroughfare and they continued to have the best record of moose breeding of any zoo in the world in spite of this, so I pass this observation on to you — for what it is worth."

**"What do you attribute that to?"** Charles Newman, an attorney for the objectors, asked.

"You wouldn't believe it," Everly replied.

"I'll believe it," Newman assured him.

"By accident, they learned that the reproductive operations in a moose respond very favorably to the feeding of bananas, so they have been feeding her bananas, and even though the bananas don't occur in the moose's natural habitat, this seems to stimulate them and this works out very well," Everly said.

From the counsel table, the voice of Hanover softly said, "Everybody is going to start eating bananas."

In summary, Everly said a proposed expressway would have no effect on the animals, whether the highway was run on the south, north or underground. He said that he has learned that animals adjust better to change and pollution than their two-legged counterparts.