

City of Alexandria, Virginia

MEMORANDUM

DATE: APRIL 5, 2006
TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL
FROM: JAMES K. HARTMANN, CITY MANAGER
SUBJECT: BUDGET MEMO # 74 : WILKES STREET TUNNEL REPAIRS

This memorandum is in response to Councilman MacDonald's questions regarding the status of the Wilkes Street Tunnel project.

The Wilkes Street tunnel is over 150 years old, and one of only a few 19th Century transportation structures surviving intact in Alexandria. Several railroads that linked Alexandria to western Virginia used the tunnel in order to move passengers, mail, and freight in and out of the industrialized area along the Potomac River waterfront in the 1850's. Additionally, rails linked the waterfront to the Alexandria Canal, which connected to the Chesapeake and Ohio Canal. Alexandria's railroads were important to the City's role as a distribution center for Union soldiers during the Civil War.

Rail operations ceased in the tunnel in 1968, and in the 1980's, it was converted for use as part of a bike trail that connects to the Mount Vernon Trail. Seeing potential structural issues arise, fixing the tunnel was established as a CIP project in FY 2004. A structural analysis of the tunnel was undertaken with CIP funds and completed in July 2004. If you are interested, a copy of this analysis can be obtained from Maurice Daly in T&ES ((703) 838-4328). At that time, it was determined that the tunnel could not safely support 36-ton vehicles, and the weight limit was lowered to 12 tons.

1. What needs repairing and why has it taken so long to identify a remedy? What are the problems in priority order? What are the safety concerns that need to be fixed?

The design phase followed the structural analysis, and the historic nature of the tunnel has contributed to the length of time that it took to complete the plans for renovation. The design went through a review process with the Office of Historic Alexandria (OHA) and the Department of Planning and Zoning (P&Z). Different options of repair were evaluated and dismissed as not keeping with the historical nature of the structure. It was determined that the tunnel is eligible for inclusion in the National Register of Historic Places.

The repairs that are needed, in priority order, include the following:

- (1) strengthening the structure by installing longitudinal structural steel ribs in the western half of the tunnel to restore its load bearing capacity to 36 tons;
- (2) improvements to the brick parapet walls along the western approach to the tunnel to increase their impact capacity;
- (3) granite curbing will be added to deflect vehicles away from the walls; and
- (4) the walls will further be strengthened by replacing all missing bricks and repointing the mortar joints.

Safety improvements will also be made to the tunnel floor, including repaving and drainage improvements. New lighting is also part of the renovation plan.

2. Why haven't deteriorating masonry walls been repointed by a qualified mason, and who did the latest work?

Repointing of the joints and masonry will complete this project. The aesthetic and functional repairs have been combined into a one-time project rather than taking a piecemeal approach to the tunnel repairs. The last repairs made to the bricks were made by City staff due to the potential of falling bricks and safety concerns for people using the tunnel. This temporary work will be replaced by qualified masons as part of the tunnel renovation. Specifications for the repointing work have been developed and reviewed by OHA and P&Z.

3. Why can't the street be closed to large trucks permanently? Why not close it to everything except cars?

The City maintains all of its streets at a capacity that will accommodate fire trucks. Additionally, oil delivery trucks, moving vans, and other heavy vehicles need to access the areas around the tunnel. While the streets over the tunnel are currently posted at a 12-ton limit, it is very difficult for the City to enforce this limit. Continued use of these roadways by heavier vehicles will, over time, lead to further deterioration of the structure and a potential long-term failure.

4. What is the cost of repairing the brick work?

At the current time, it is estimated that the brickwork will cost approximately \$100,000 of the \$770,500 construction budget.

Please do not hesitate to contact Richard Baier at (703) 838-4966 or Emily Baker at (703) 838-4327 if you have questions or need further information.