


City of Alexandria, Virginia

MEMORANDUM

DATE: APRIL 13, 2007

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: JAMES K. HARTMANN, CITY MANAGER 

SUBJECT: CONSIDERATION OF TRAFFIC AND PARKING BOARD
RECOMMENDATION ON THE INSTALLATION OF A TRAFFIC
SIGNAL AT THE INTERSECTION OF SOUTH WASHINGTON
STREET AND WOLFE STREET

ISSUE: City Council consideration of Traffic and Parking Board recommendations regarding the installation of a traffic signal at South Washington Street and Wolfe Street.

RECOMMENDATION: That City Council authorize staff to install a traffic signal at the intersection of South Washington Street and Wolfe Street. The Traffic and Parking Board held a public hearing on this on March 26 and following the public hearing recommended that the traffic signal be installed.

BACKGROUND: Staff has received a number of complaints from motorists and pedestrians about the intersection of South Washington Street and Wolfe Street. This intersection is located one block south of Duke Street within the Old Town neighborhoods, in District 1. Land use along Washington Street is commercial and along Wolfe Street is residential. Because of its diversity, this intersection has a number of competing needs between motorists, pedestrians, and bicyclists as well as sight distance limitations.

South Washington Street, near this intersection, functions as a six-lane (three travel lanes in each direction), closed section, undivided facility, which generally runs in a north-south direction. On weekdays, curb lanes in northbound and southbound directions operate with HOV lane restriction between 7:00 A.M. and 9:00 A.M., and 4:00 P.M. and 6:00 P.M., respectively. During other time periods parking is allowed on curb lane.

South Washington Street is classified as an arterial on the City's Roadway Functional Classification Map. The VDOT's 2005 Traffic Volume Data shows that near the study intersection, the average daily traffic (ADT) along Washington Street is approximately 25,000 vehicles. The posted speed limit is 25 mph.

Near the study intersection, Wolfe Street is a two-way, closed section, undivided facility with parking on either side. This roadway runs in an east-west direction. Wolfe Street is

classified as a local street on the City's Roadway Functional Classification Map. The posted speed limit is 25 mph. A Stop sign is installed at each approach along Wolfe Street.

The closest signalized intersections are the intersection of S. Washington Street and Duke Street approximately 450 feet to the north, and S. Washington Street and Wilkes Street approximately 450 feet to the south.

This issue was taken before the Traffic and Parking Board for a public hearing at the March 26, 2007, meeting. After hearing public testimony, the Board voted to recommend to City Council that a traffic signal be installed at the intersection of South Washington Street and Wolfe Street.

DISCUSSION: Staff performed an engineering study and found that the intersection of South Washington Street and Wolfe Street meets the criteria established in the Manual of Uniform Traffic Control Devices (MUTCD) for traffic signal installation. As part of this study the traffic and pedestrian volumes, safety, and delay at this intersection were taken into consideration. A rigorous review should always be performed before installing a traffic signal because traffic signals have been found to increase the number of rear-end type collisions.

The data, which were obtained from the Alexandria Police Accident Listing Report, show that there were 28 accidents reported at that intersection during the three-year period January 1, 2004, to December 31, 2006.

The leading accident type at that intersection is angle accidents. This accident type accounted for approximately 75% of the total accidents. There were six (6) right angle accidents in the year 2004, six (6) in the year 2005 and nine (9) in the year 2006. The accident records also show that one (1) pedestrian accident occurred at that intersection.

A warrant analysis was performed using the criteria contained in the Manual on Uniform Traffic Control Devices (MUTCD). The results of the traffic signal warrant analysis show that a traffic signal is warranted at the intersection of South Washington Street and Wolfe Street at this time. The Crash Experience Warrant of the MUTCD, for the installation of a traffic control signal, is presently satisfied at that intersection.

The results of the Crash Experience Warrant analysis show that there were six (6) signal correctible accidents in the year 2004, six (6) in the year 2005, and nine (9) in the year 2006. Angle accidents are considered correctible by the installation of a traffic signal. Volume conditions specified for the Crash Experience Warrant are satisfied for 8 of 8 required hours. The warrant is satisfied.

The new traffic signal should include special pedestrian features. Pedestrian push buttons should be installed on both sides of the mainline to facilitate pedestrians crossing Washington Street. Often times, queues from adjacent intersections extend through the Wolfe Street intersection. When a traffic signal is installed at the intersection of S. Washington Street and Wolfe Street, the operation of the new signal will be coordinated

with the existing signals on Washington Street. Except for Wolfe Street, all intersections on Washington Street are signalized.

FISCAL IMPACT: The construction cost of the traffic signal is estimated to be \$100,000. Funding for this project is included in the Capital Improvement Program (CIP). The annual operating cost for this signal is expected to be \$2,500.

STAFF:

Richard J. Baier, P.E., Director, T&ES

Tom Culpepper, P.E., Deputy Director, T&ES

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