

## City of Alexandria, Virginia

## MEMORANDUM

DATE: APRIL 4, 2005

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: JAMES K. HARTMANN, CITY MANAGER 

SUBJECT: CONSIDERATION OF A REQUEST TO INSTALL A TRAFFIC SIGNAL AT THE INTERSECTION OF HENRY STREET AND FIRST STREET

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**ISSUE:** City Council consideration of recommendations regarding the installation of a traffic signal at the intersection of Henry Street and First Street.

**RECOMMENDATION:** That City Council authorize installation of a traffic signal at the intersection of Henry Street and First Street.

**BACKGROUND:** In the fall of 2004, a citizen contacted the Transportation Division with concerns regarding the safety of pedestrians crossing Route 1 near the intersection of Henry Street & First Street. Staff evaluated this intersection by collecting both vehicular and pedestrian volume data and reviewing Police Department accident records to note the number of accidents as well as identify any patterns. Consideration was also given to the future growth in the immediate area, including commercial and residential development. A review of this data with respect to the Manual on Uniform Traffic Control Devices (MUTCD) for installation of traffic signal control devices revealed that the warrants are not currently met, primarily due to the low side-street volume (First Street) and the volume of pedestrians falling just below the pedestrian threshold. However, as permitted by MUTCD guidelines, it is projected that with ongoing growth in the area, the warranting pedestrian volumes will exist at this location in the near future. In the area, it is felt that with increasing demand and lack of adequate pedestrian facilities, signalized control would improve operations and safety.

In February of this year, this issue was considered by the Traffic and Parking Board. Following a review of the study findings and a public hearing, the Board voted unanimously to recommend approval of this traffic signal to Council. Several citizens spoke in support of the recommended traffic signal, reiterating the issues raised by the study.

**DISCUSSION:** The basis of this request is addressing community concerns related to the safety and ease of pedestrian access at the intersection of Henry and First Streets. Despite the limited traffic controls at this intersection, it is a heavily traveled pathway for walking commuters traveling to and from the Braddock Road Metro Station and for area residents walking to nearby commercial developments.

The current stream of pedestrian traffic appears to be a precursor of a steadily increasing pedestrian demand with these expected residential and commercial development that will take place over the next two years in the immediate area. The existing and planned development in the area allows an opportunity to provide the infrastructure to accommodate this increasing demand. The intersection of North Henry Street and First Street has a unique "Y" configuration, supporting a number of movements, which introduces more opportunity for potential conflicts. Being one of the major commuter corridors through the City, North Henry Street has a daily traffic volume of approximately 60,000 vehicles.

Although the MUTCD's traffic signal warrants are not currently met, sound engineering judgment would dictate that a traffic signal be installed to safely accommodate the increasing pedestrian demand, the considerable number of children crossing Route 1 during "rush hour" to access the McDonald's Restaurant, and the general lack of pedestrian facilities in the immediate area. As residential and commercial development continues, the demand for pedestrian access to the nearby Braddock Road Metro Station, and area businesses will keep pace. The installation of this traffic signal provides an opportunity for the City to be proactive in its approach to traffic safety improvements.

Given the complex physical make-up of this intersection, the installation of a traffic signal requires a unique design. The design and operation of this signal will include a detailed review of pedestrian travel patterns, an evaluation of alternative designs, and an operational analysis to determine the impact on existing traffic operations. Staff is prepared to initiate this design process immediately following Council approval of the signal.

**FISCAL IMPACT:** The estimated total cost for installing this traffic signal is \$95,000. The T&ES Department will seek proffers from developers in this area, as major contributors to the future increase in traffic demand. Any portion of the cost of installation not covered by developer proffers will be absorbed by the Transportation Division's Traffic Control Facilities operating budget.

**STAFF:**

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

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

William L. Haynes III, P.E., Traffic Signal Systems Engineer, T&ES