

City of Alexandria, Virginia

MEMORANDUM

DATE: MARCH 8, 2007

TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL

FROM: JAMES K. HARTMANN, CITY MANAGER

SUBJECT: BUDGET MEMO # 7: STREET LIGHTING

This memo is in response to the following Council budget question regarding street lighting.

We regularly hear about the lack or limited quality of street lights in areas such as the Inner City, Old Town, Arlandria and Del Ray. The Inner City has asked about this. The Del Ray Citizen Association has asked about this. The Potomac West Business Association has made this their top priority. The lack of good lighting impacts the walk-ability of our neighborhoods as well as the real and perceived safety of those neighborhoods. It also has an impact on economic development as businesses in these areas may have less nighttime business due to the poor lighting. Could staff recommend the cost of a multi-year, comprehensive street light program to address this need? Would solar street lighting make this less or more expensive?

Complaints about street lighting in the City generally fall into two categories. The first category of complaints is related to the amount of lighting, primarily for pedestrian safety or to deter crime. The second category of complaints is related to the type of light fixture and the desire for a decorative style fixture to light the street and/or sidewalks for more aesthetic reasons. To date, lighting concerns have been addressed on a case-by-case basis.

Mount Vernon Avenue

There are other commercial and residential areas of the City where neighborhoods have complained about lighting. A recent lighting study was conducted along the Mt. Vernon Avenue corridor in Del Ray to assess the sidewalk lighting levels. The study found that there are some areas along the Avenue where additional lighting is necessary. Given the significant capital and operating costs (about \$100,000 per block for installation and \$2,400 per block for annual operation) to install and maintain new pedestrian-scale light poles, staff has recommended adding building mounted light fixtures along the corridor to address this safety concern for the business district. The proposed budget includes \$30,000 in the CIP combined in FY 2009 and FY 2010 to provide a grant program for

private building owners to provide this lighting. While this will not address the concerns of some area residents who wish to see decorative street lights along the corridor, it does provide a cost effective solution to the pedestrian safety concern while sharing the cost with the private sector. This is discussed on page 10 of the CIP.

New Street Lights

The CIP also includes \$25,000 annually for installation of new street lights (p. 87). This funding is used to address complaints associated with a specific location or intersection. Because staff often receives complaints of light trespass in residential bedroom windows from street lights, T&ES requires a petition to be signed by all neighboring residents (those that will be impacted by the new light source) in support of the request before any new light is installed. While there are methods of shielding lighting from neighboring windows, it is not possible to eliminate all impact on adjacent properties.

Cost of Comprehensive Study

In order to comprehensively study the residential and commercial areas where staff routinely receives complaints, \$150,000 would be needed to collect the lighting levels, conduct the study and recommend alternatives. A cost for implementing the alternatives cannot be identified until after the study is completed. As an example, the cost estimate we received to install pedestrian scale light poles on one side of the street in the core commercial area on Mt. Vernon Avenue was approximately \$430,000 in 2005 dollars, not including installation costs. Alternatives may include increased wattages in existing lights, adding additional street lights and adding pedestrian scale lights. Recommendations are also likely to include extensive tree trimming, as many existing street lights are blocked by adjacent street trees. At this time, staff cannot estimate the costs of additional electrical wiring that may be required, including restoration for any excavation of streets and sidewalks. Increased operating costs will also have to be considered with any plan to upgrade lighting within the public right-of-way. The City currently pays over \$100,000 per month to Dominion Virginia Power for the operation of the City's cobra-head street lights. In addition, it should be noted that the cost for the maintenance of energy to the decorative style fixtures, like the acorn lights in Cameron Station and Carlyle, is higher than for the standard cobra-head fixture.

Solar Power Lighting

T&ES and Planning staff have met with vendors and suppliers of solar powered lighting to investigate the use of these lights for street and sidewalk lighting. Two primary challenges were identified with using these types of lights. The first challenge is the size of the panels. Based on the latitudinal location of Alexandria and the desire to have the lights operating all night during the winter months, the solar panels would need to be very large. This would be aesthetically undesirable in many neighborhoods. The second challenge to using these lights is the interference caused by trees. The vendors noted that solar lights are most effective in areas without street trees nearby. For example, Mt. Vernon Avenue was evaluated by a solar light vendor and found to have too many street trees for solar lighting to be suitable. The cost of installing solar lighting would not necessarily be more expensive than installing conventional lighting since they would not require wiring into the system (unless they were connected to the electrical system as a

back up). However, the City's street lights are owned and maintained by Dominion Virginia Power. If the City installed solar lights, they would be owned and maintained by the City, adding operating costs and the need for a location to stockpile the replacement inventory.