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DEPARTMENT OF  
PUBLIC WORKS

ENGINEERING DIVISION

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May 8, 1990

Joint Budget and Finance/  
Transportation and Community Development Committee  
Sacramento, California

Honorable Members In Session:

**SUBJECT:** Report Back on Capital Improvement Program Issue Statement  
Number 5 - Unmet Needs of Street Light Conduit and Luminaire  
Replacement Program, and Street Light Construction

SUMMARY

It was requested to report back on three issues: 1) The availability of the Lighting and Landscape Act of 1972 to fund improvements and maintenance, 2) the need for street lighting and 3) the serial circuit conduit replacement program.

BACKGROUND

Lighting and Landscape Act of 1972

The Lighting and Landscape Act of 1972 provides a funding mechanism for public agencies to determine benefit and establish fees for the purpose of constructing and maintaining public lighting and landscaping improvements.

The first lighting and landscaping district established by the City Council last year provided partial funding for the maintenance of parks, provided for the current level of service of street light maintenance, and provided for the payment of current street light energy bills. It did not provide for improvement in the level of service for street lights maintenance or the initiation of new maintenance programs. It also did not provide for the construction of new street lights.

Revision of the original purpose of the current lighting and landscape district may necessitate a restructuring of the current assessments. Addition of new programs beyond those currently approved may result in additional assessments based upon additional benefits.

If the Council chose, the current lighting and landscaping district could be modified to provide additional funds for the construction of street lights for the 24,000 homes with inadequate lighting; however, special benefit would need to be determined and the level of assessment increased for each affected residence. Unlike assessment districts, the fees would need to be levied and funds accumulated before construction could begin. This is because bonds are not sold. With assessment districts, municipal bonds are sold to provide construction funds at approximately the same time the assessments are being paid. Assessment districts can be used jointly with lighting and landscaping districts.

In summary, street lights can be provided through the Lighting and Landscape Act of 1972, through the use of 1911 Act or 1915 Act Assessment Districts, or through special funding such as CDBG funds.

#### Inadequate Street Lighting

The City has approximately 102,000 residences, of which 77,000 have street lighting usually provided through the subdivision process, with a minor amount being provided through CDBG funding or assessment districts. There remains approximately 24,000 homes without adequate street lighting. It is estimated that it would cost approximately \$20,000,000 to provide street lighting for these residents.

In the past five years, two assessment districts have provided street lights to 450 homes. The assessments range from \$350 per residence to over \$500 per residence. Currently it is estimated that conventional street lighting would cost approximately \$800 per residence to construct. Over a ten year period, this is less than \$15 per month.

The areas of the City without street lighting are generally those constructed prior to 1964, although some older subdivisions included street lights at the developer's option.

### Series Circuit Conduit Replacement

The replacement of street light conduits is not a routine maintenance activity such as the replacement of a knocked down street light or repair of a street light not working. The failure of the electrical conduits is a result of deterioration with age and represents long-term deferred maintenance.

The unique feature of street lights with electrical circuits serially connected is that when they fail, there is a direct ground short with a very high voltage. This causes a potential hazard to individuals in the vicinity. The design of street lights with serial circuits was changed in the late 1940's, and the hazard does not exist in street lighting constructed since. Like other aging infrastructure such as sewer systems, water systems, and streets, the long-term maintenance is a City responsibility, although some direct local benefit may be found on further staff study. In summary, this is a long-standing, non-standard problem which the City needs to begin to address.

It was proposed to fund the street light conduit replacement program at the level of \$100,000 per year, but only \$60,000 was available through the Lighting and Landscape District. Last year's funding was \$50,000 from the Lighting and Landscaping District.

### FINANCIAL DATA

If additional programs are implemented, there will be financial impacts associated with this item.

### POLICY CONSIDERATIONS

The funding of major maintenance and new construction is a policy issue.

### MBE/WBE EFFORTS

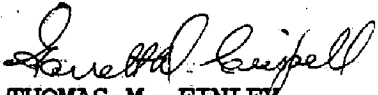
None.

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RECOMMENDATION


This report is submitted for Committee information only.

Respectfully submitted,

  
for THOMAS M. FINLEY  
Engineering Division Manager

Approved for Committee Information:

Approved:

  
for SOLON WISHAM, JR.  
Assistant City Manager

MELVIN H. JOHNSON  
Director of Public Works

May 8, 1990  
All Districts

CONTACT PERSON

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Attachment

## CIP ISSUE STATEMENT #5

UNMET NEEDS OF STREET LIGHT CONSTRUCTION, CONDUIT  
REPLACEMENT AND LUMINAIRE REPLACEMENT PROGRAM

In the 1989-90 CIP, \$50,000 was approved to begin the maintenance replacement of the electrical conduits for the street light systems wired in series circuits. These occur in the City's older subdivisions constructed before 1948. In the many decades since their construction, the original conduits holding the electrical wires have corroded and occasionally fail. The failures could cause a potential hazard.

Additionally, the street lights in this area were converted to mercury vapor luminaries by the City as an energy conservation measure during the past 20 years. It was recognized at the time that mercury vapor lights decreased in lighting efficiency with age. Many of these lights have aged to a point where the level of light produced is inadequate. They are in need of maintenance replacement with more energy efficient high pressure sodium luminaries.

A preliminary estimate of the repair cost of these deficient lighting systems is approximately \$10,000,000.

It is proposed that the appropriation level of \$50,000 in 1989-90, be increased to \$60,000 in fiscal year 1990-91.

It is recognized that the proposed level of funding is not adequate to resolve the problem. It will, however, allow for the maintenance replacement of the most corroded systems and the beginning of the long process of replacing 50 years of deterioration. As the magnitude of the problem becomes better known, staff will develop in the next year a systematic program for addressing this problem which could include property owner cost participation where major up-grading occurs.

Other Unmet Street Lighting Needs

Street lights have been constructed at property owner expense in all new subdivisions since about 1964, and in some subdivisions before that date at the subdividers option. This process has provided property owner funded street lighting to 77,000 homes. Many subdivisions built before 1964 do not have street lighting, and some also do not have curb and gutter, sidewalks, storm drainage, or sewer as well.

The City has 24,000 homes without adequate street lighting. The construction of street lights for those homes would cost \$20 million.

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In the past few years two assessment districts have provided street lights to 450 homes. The property assessments cost \$10 to \$15 per month, or \$400 to \$600 if paid in cash. Assessment districts are the current method for property owners to provide older neighborhoods with street lights.

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