

**TO:** CITY MANAGER

**DATE:** 1997 04 01

**FROM:** DIRECTOR ENGINEERING

**FILE:** 50-02-03

**SUBJECT:** CORRESPONDENCE FROM ALAN DEWEY

**PURPOSE:** To address the concerns regarding the safety of City street light standards expressed in the letter from Mr. Alan Dewey dated 1997 March 05.

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**RECOMMENDATION:**

1. THAT Mr. Alan Dewey of 4575 Harken Drive be sent a copy of this report.

**REPORT**

Appearing on the agenda for the regular Council meeting held on 1997 March 10 was a letter from Mr. Alan Dewey of 4575 Harken Drive regarding a traffic incident involving a street light standard. Staff subsequently met with Mr. Dewey to discuss this matter.

This incident involved a stolen vehicle hitting a street light pole resulting in part of the fixture being flung into the yard of one of Mr. Dewey's neighbours. The main concern is that the impact appeared to be relatively minor, in that the pole was not knocked over and the car was not severely damaged, but a piece of the fixture was found approximately 25m away.

Impacts between motor vehicles and street light poles are not uncommon occurrences in urban areas and usually involve damage to the pole and base. Some of these impacts result in the loosening of the fixture to the point of mount failure. If it becomes dislodged, the fixture either remains attached by the electrical wiring or falls somewhere near the pole base. Discussions with our maintenance contractor confirmed that it is a unique occurrence for the fixture to be flung as far as the one observed by Mr. Dewey.

In this case, we assume that the impact was sufficient to cause severe oscillation in the pole causing failure of the fixture mount. The nature of the oscillation must have been such that the fixture was released upwards and outwards with sufficient force to carry it to its final resting place. Our initial assumption was that the fixture fell, was picked up and discarded where it was found but we understand from Mr. Dewey that the vehicle crash was immediately noticed by neighbours. The fixture was disposed of before staff had an opportunity to examine it for structural weakness. There are several thousand fixtures made by the same manufacturer throughout the City. There have been no similar incidents that would indicate any particular design flaws but we will ask our maintenance contractor to report any similar future incidents.

With reference to the specific questions posed in Mr. Dewey's letter, the answers are as follows:

**1. Are these lights properly and safely secured?**

Street light fixtures are secured to a tenon on the pole arm with a four bolt clamp. This same clamp is used to level the fixture. Once installed, looseness in the clamp would be immediately observed in misalignment of the fixture. Historically, we have found that properly mounted fixtures do not come loose through normal wear and tear. Only a significant impact due to a motor vehicle collision will dislodge a fixture.

**2. Is there a safety chain attached for sudden dislocation?**

There are no safety chains or cables attached to street light fixtures. As stated previously, fixture mounts are not prone to failure without the application of significant external force.

**3. Are they inspected for corrosion or other potential bonding problems?**

Street lights are re-lamped every four years. During re-lamping, the fixture is cleaned and inspected to ensure it is securely mounted and in good condition.

**4. Is it an inherently safe design?**

Street light fixture designs have changed slightly over the past twenty-five years. However, the mounting system has not changed significantly during this period. There are millions of street lights of similar design worldwide. Staff are not aware of any safety problems with any fixtures used for roadway lighting.

  
DIRECTOR ENGINEERING

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