

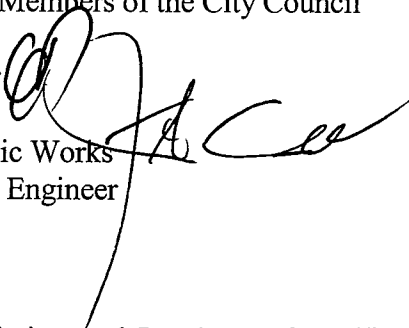


Agenda Item #: 07/0807.10

# Staff Report

## City of Manhattan Beach

**TO:** Honorable Mayor Tell and Members of the City Council

**THROUGH:** Geoff Dolan, City Manager 

**FROM:** Jim Arndt, Director of Public Works  
Erik Zandvliet, City Traffic Engineer

**DATE:** August 7, 2007

**SUBJECT:** Consideration of Appropriation and Purchase of Traffic Signal Warning Lights to be Installed at the Intersection of Manhattan Beach Boulevard and Redondo Avenue as Approved by City Council July 17, 2007.

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### RECOMMENDATION:

It is recommended that the City Council approve the purchase and installation of two solar powered dual-light school flashing beacons and associated pavement markings on Manhattan Beach Boulevard near Redondo Avenue, and appropriate a not-to-exceed amount of \$20,000 from the City Council Contingency Fund.

### FISCAL IMPLICATION:

The flashing beacons, signs and related equipment, estimated at \$10,000 per location, would be funded through an appropriation from the City Council Contingency Fund.

### DISCUSSION:

On July 17, 2007, the City Council discussed a petition request from Mr. Marc Reede, a local resident, to install fully protected left turn arrows in the eastbound and westbound directions on Manhattan Beach Boulevard at Redondo Avenue. The petition states that vehicles in the westbound direction are speeding during school hours, and are being cut-off by drivers making the eastbound to northbound turns at an intersection with high student pedestrian crossing volumes. The petition was previously reviewed by the Parking and Public Improvements Commission (PPIC) on May 24, 2007 at which time the PPIC recommended that the request for protected left turn arrows be denied but that "pedestrian countdown signal" indications be installed at this intersection.

The City Council upheld the PPIC recommendation in that it denied the request for fully protected left turn arrows and approved the installation of pedestrian countdown signal indications (which will be funded through the existing Public Works budget). However, to further enhance public safety, the Council also approved the installation of flashing school beacons and related pavement markings in each direction on Manhattan Beach Boulevard

approaching Redondo Avenue.

Staff has determined that dual-light solar powered flashing beacons would be the most appropriate and cost-effective system for both locations. The beacons are programmable to operate only during school hours on school days. Staff's recommendation will authorize the City Manager to purchase and install the required equipment and pavement markings for a not-to-exceed amount of \$20,000 to be funded by the City Council Contingency Fund.

It is expected that all of the approved improvements will be completed within two to three months, given time needed to process the related work order and purchasing of equipment.

Attachments: A. Solar Powered School Flashing Beacon

# Solar-Powered School Zone Flasher - R829C



Ultra-compact and energy efficient, Carmanah's Model R829C is the most advanced solar LED school zone flasher available. The Model R829C is fully programmable and combines advanced electronics and software with an innovative, patented combination of solar power and LED technology. As with all of Carmanah's roadway products, the R829C operates reliably in all climates, automatically adjusting to prevailing solar conditions.

### Improves Safety

The Model R829C system effectively improves driver awareness in marked school zones, helping to reduce vehicle speeds and increase safety.

### Innovative Solar Design

The R829C utilizes Carmanah's core energy management system (EMS), a technology developed and refined for more than a decade. Engineered for up to five years of maintenance-free operation, the R829C has been designed to operate reliably under all environmental conditions at most locations in North America.

### Complete Solution

This solar LED flasher includes the solar panel, battery and electronics all housed in one compact enclosure located above the signal head. This design eliminates any need for cumbersome battery or control cabinets that are common targets for vandals and potential hazards for pedestrians.

### Cost Effective Installation

The R829C installs on an existing sign post in minutes and significant savings are achieved during installation as the unit requires no external power, trenching, cabling or disruption to traffic flow. Even the process of obtaining power connection permits and underground checks is eliminated.

### Carmanah offers two options for calendar programming via:

#### Centralized Control

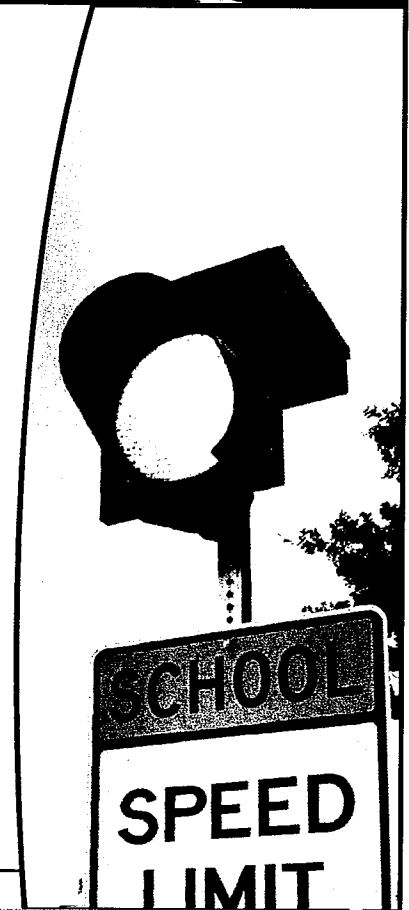
With the addition of centralized control capabilities, Carmanah's R829C solar flashers are compatible with most third party communication devices. This allows for remote wireless programming using devices such as pager programmable time switches and two-way radios. Centralized control gives users the flexibility to make calendar changes to the R829C without requiring a trip into the field.

#### Software

Carmanah's solar school zone flasher is controlled using an intuitive Windows-based software program. The system can be scheduled to turn on and off several times per day in accordance with when children are going to and leaving the school grounds.

#### Features

- Self-contained with no separate control cabinet or battery cabinet
- Flexible design enables any configuration of single, dual or bi-directional dual beacons
- Patented Energy Management System (EMS) optimizes system performance and ensures reliable operation
- Provides up to five (5) years of operation without maintenance or servicing
- MUTCD compliant
- Manufactured under ISO 9001:2000 Quality Assurance System



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ATTACHMENT A

# Solar-Powered School Zone Flasher - R829C



## OPERATION

Flash pattern MUTCD compliant  
 Button activation MUTCD compliant

## LED SIGNAL MODULE

Standard ITE VTCSH LED circular signal supplement\*  
 Size 12" (300 mm) diameter

## ENVIRONMENTAL

Optimal ambient temperature range -4° to 77° F (-20° to +25° C)  
 Maximum ambient temperature range -40° to 176° F (-40° to +80° C)  
 Solar requirements: maximum installation latitude 55° North / South

## ENERGY MANAGEMENT SYSTEM

Battery lifespan 5-8 years (field replaceable)  
 Operation capacity without solar charging 30 days  
 Daily operation profile Up to 12 hours per day

## MOUNTING HARDWARE

Mounting hardware options 2" square, 2 1/2" round, 4 1/2" round  
Pelco traffic signal mounting hardware

## TRAFFIC CONTROL DEVICE STANDARDS

Manual of Uniform Traffic Control Devices Meets all MUTCD standards for flashing beacons

## QUALITY STANDARDS

Quality assurance ISO 9001:2000

## WARRANTY

Term 3-year prorated warranty on entire system including batteries

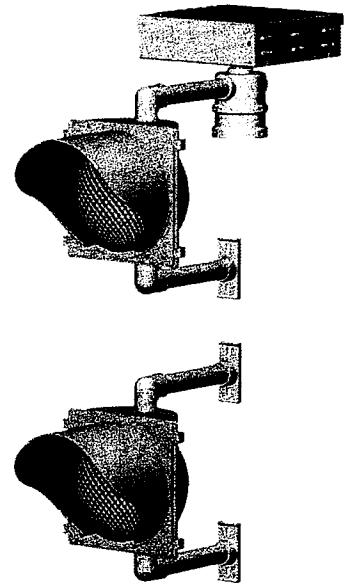
\* Meets all specifications for flashing beacons required by MUTCD, chapter 4D.18  
 All specifications are subject to change without notice.

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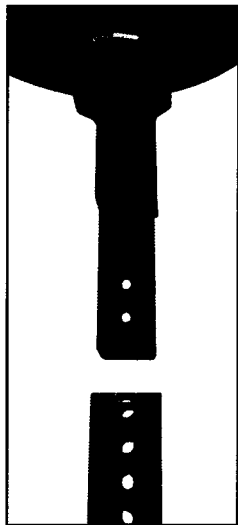
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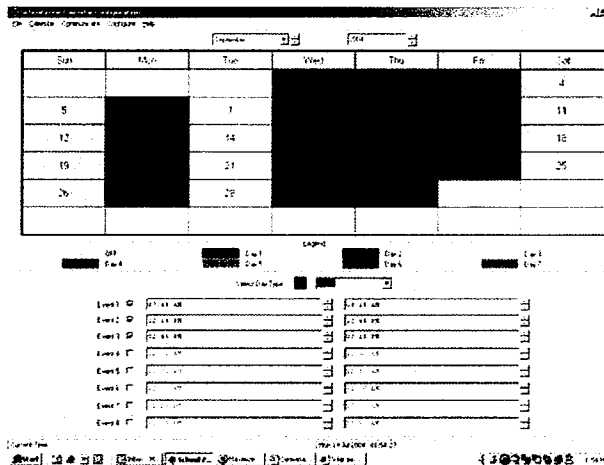
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Optional single or dual beacon configuration



Installs in minutes to 2" square or round sign post



User-friendly Windows-based software allows for easy programming of up to 500 days of operation

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