

# SOLAR TRAFFIC CONTROLS

## “Wireless” Traffic Control Solutions

**APPLICATION:** *School Zone Flashers and Radar Speed Displays*

**LOCATION:** *City of Mesa, Arizona U.S.A.*

### **Description**

The City of Mesa, AZ has increased safety at a school zone along Baseline Road, an arterial which parallels the 260 freeway. Jan Siedler, City of Mesa Traffic Signals supervisor, indicated that motorists have registered speeds of up to 65mph along this arterial. The route posts a 45mph limit and 35mph when school is in session. Last fall, a student was killed in a speed-related accident in front of the school.

To increase motorists' awareness, the city decided to add flashing beacons and contacted Solar Traffic Controls (STC) for solar-powered system configurations. After several iterations, the city chose to deploy dual 8-inch amber flashers in front of the school and dual 8-inch flashers with 3M Driver Feedback radar speed displays in advance of the school crossings.

To operate the four units, the city chose to go with a paging activation package controlled from its traffic management center. Only one of the dual flasher units, the system master, is equipped with a pager receiver. Control of the other three units by the master is accomplished using a license-free radio link activated when a valid paging signal is received by the master. Paging control is done using an off-the-shelf scheduling program which allows the city to program a full year of scheduled activations and holiday breaks. To confirm operation of the system a belt clip pager unit was furnished to the city for the account.



*3M Driver Feedback data collection system*



*City of Mesa school zone flasher along Baseline Road*

To verify the effectiveness of the system, the city is using the 3M Driver Feedback sign's data collection feature and road tubes at the flashers to collect data regarding motorists' compliance with the new warning flashers. Results have shown that motorists are adhering to the posted speed limits. This project is the first application of pager-activated flashing beacons for the City of Mesa.

The master system is a modified version of STC's pager-activated school flasher unit and uses a Nighthawk PT1004. It was modified with programmable logic and a license-free radio transmitter. The dual 8-inch flasher unit and the two flasher/radar speed displays are all standard versions of STC's XSR product line. Installation was performed as a joint effort between Mesa, United Rentals, and Hanmar Energy with supervision and commissioning by STC. The LED lamps are Precision Solar DC lamps with an optical output of over 600 candela on center making them exceedingly conspicuous to oncoming traffic.

These school zone flashers operate for 13 hours per school day due to the many activities at the school.

**Provide Your Requirements to Solar Traffic Controls**

Name \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Telephone (\_\_\_\_) \_\_\_\_\_ Fax (\_\_\_\_) \_\_\_\_\_  
Cellular (\_\_\_\_) \_\_\_\_\_  
e-mail \_\_\_\_\_

**The success of your solar-powered project is based on three things:**

- **Location: where your application site is - nearest town and state**
- **Load: number and size of lamps, timers and other controls - anything which draws power.**
- **Duty Cycle: hours per day and number of days per week the load is active (on).**

**The above information enables us to provide you with a Sizing Report which forms the basis of your warranty.**

**Type of System**

*(please check your requirements)*

**Solar Flasher**

Lamp Size:  12 inches  8 inches  Other - Please indicate size \_\_\_\_\_  
Lamps per pole:  1  2  Other - Please indicate quantity \_\_\_\_\_  
Lamp Color:  Amber  Red  
Type:  School Zone  24-Hour  Sensor Activated  
Run time: \_\_\_\_\_ hours per day \_\_\_\_\_ # of days per week  
Module Option:  Vandal Resistant Activation:  Timer  Pager

**DCUPS Flasher**

Lamp Size:  12 inches  8 inches  Other - Please indicate size \_\_\_\_\_  
Lamps per pole:  1  2  Other - Please indicate quantity \_\_\_\_\_  
Lamp Color:  Amber  Red  
Type:  School Zone  24-Hour  Sensor Activated  
Run time: \_\_\_\_\_ hours per day \_\_\_\_\_ # of days per week  
Module Option:  Vandal Resistant Activation:  Timer  Pager

**Sensor Power System**

Sensor load: \_\_\_\_\_ amps/watts  
Communications Load: \_\_\_\_\_ amps/watts

**Location**

Application Site (nearest town): \_\_\_\_\_  
State/Province: \_\_\_\_\_

Please fill in your requirements with **blue or black pen**. Please **fax** to Solar Traffic Controls at 480-449-9367.

**Questions?** Please call us at 480-449-0222. We will contact you with a quote for your system.



**For more information**

Solar Traffic Controls, LLC  
1930 East Third Street, Suite 21  
Tempe, Arizona 85281-2929 USA  
Phone: 480-449-0222  
Fax: 480-449-9367  
Email: info@solar-traffic-controls.com  
Website: www.solar-traffic-controls.com