



## **"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.

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 Night hawk 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



*3M Driver Feedback  
data collection system*



*City of Mesa school  
zone flasher along  
Baseline Road*



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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.

**Take these steps to insure the success of your solar-powered project:**

1. Location - identify the site of the application; for example, the nearest town, village or city and state.
2. Load - specify the number and size of lamps, timers or other controls (anything which draws power).
3. Duty Cycle - determine how many hours per day and which days per week the load will be drawing power.

**Go to "Send us your requirements" at [www.SolarTrafficControls.com/support/requirements.php](http://www.SolarTrafficControls.com/support/requirements.php) for more details.**

**Solar Power: a free source of energy**

STC's solar-powered systems are designed for quick and easy installation in the field. Our careful front-end engineering minimizes your installation costs and provides years of trouble-free operation. The standard solar power system includes the solar array, system enclosure with all the necessary electronics, color-coded wiring harnesses, sealed batteries and full documentation. DC LED lamp kits can also be purchased. These include the LED beacon, lamp housing and mounting hardware.

**STC Systems are Cost Effective**

Our solar flasher systems allow you to stretch your budget to obtain the traffic safety devices you need at affordable prices. Most systems are equivalent to the cost of obtaining an AC power drop. Battery life is typically three to six years; less expensive than grid electricity for the same period of time.

Solar Traffic Controls (STC) provides solar-powered traffic control systems for city, state and federal DOTs; police, firefighting and public works departments; facility maintenance and plant safety industries. Our primary products are solar-powered flashing beacon systems used for school zones and 24-hour applications. We also supply specialized flasher systems using environmental sensors and custom communications packages to control the flashing beacon systems. Our product spectrum also includes wireless power systems for ITS, EMS and HAR. STC's products and services are sold through a network of regional distributors who offer technical support for your project.

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