



“Wireless” Traffic Control Solutions

APPLICATION: *Industrial Traffic Control*

LOCATION: Northern Arizona, U.S.A.

Description

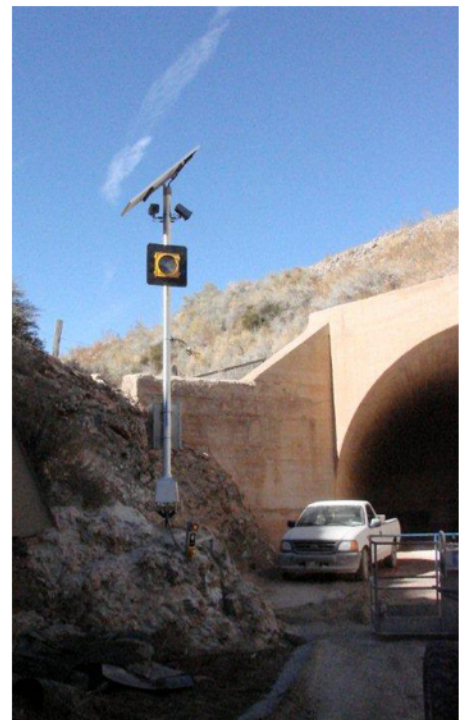
Solar Traffic Controls has completed delivery of an industrial traffic control system for an open pit mine in Northern Arizona. The mine is developing a new deposit of material on the other side of a rail overpass from its primary dig site. The rail overpass includes a curved tunnel approximately 80 feet long. The eastbound approach to the tunnel is on an incline and trucks entering the tunnel need to take a sharp turn to enter. This turn, coupled with a curve in the tunnel and the height of the overpass, make it impossible to see traffic approaching from the other side of the tracks. Also, the haul trucks deployed at the site are so large only one truck can transit the tunnel at a time.

The mine safety manager began looking for options and devised a scheme to have an automation engineer at the plant build the system. While researching possible sensors for the project, the mine decided to have STC design and build the system.

The system design is based on the Solar Ped-X product line which uses wireless communications to control the lamps. The main goal of the system is to function as a single lane, industrial traffic control, which STC has previously furnished as a hardwired, AC powered system for many years. This goal required modifications to the standard software to place the system in standby (dark signals); respond only on sensor detection of a vehicle approaching the entry; and sequence the lamps in a specific manner to facilitate easy transit by the users.

Since the project is on private property, STC was able to apply equipment not integrated in normal systems. To minimize hardware on the pole and to aid color-impaired truck operators, STC selected an Industrial Traffic Solutions 12-inch dual color lamp. The lamp features a red X and a yellow ball, all LED, in the same signal face. Each entry is equipped with a TC26B sensor configured as an approach detect. Each exit is also equipped with an exit detector and

both entries are also equipped with a Polara Bulldog pedestrian button. The balance of the equipment is a standard Solar Ped-X crosswalk system with FHSS radio connection and a solar-powered system.



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be an issue since the digital coding of the radios allows multiple transmitter/receivers to operate without interfering with each other.

This is a handicap-friendly system because there's no contact needed for activation. Additional options are available for the system such as a "tattletale" light to make the unit more user friendly. The system sensors operate on a 24-hour basis. The flashing beacons only activate when alerted by the sensors. The total run-time is one hour of flashing per day.

The Arlington County solar-powered crosswalk flasher illustrates many of the benefits of solar technology: no trenching, no boring and reduced costs. Solar-powered traffic controls are the answer when power is too difficult to obtain; when it takes too long to run it to a site or where there's too many obstacles in the ground. If you can't bore under the road or across the road or dig up paving stones – solar is a viable solution.

When a traffic control project is defined correctly, i.e., all the equipment in the load and each component's duty cycle identified, solar clearly offers a cost-effective and feasible alternative – almost a set-it-and-forget-it type of product.

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 number of hours per day and days per week the load will be drawing power.

Go to "Send us your requirements" at 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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