



## **“Wireless” Traffic Control Solutions**

**APPLICATION:** *Custom Lane Control System*

**LOCATION:** *Walter Reed Medical Center II, Maryland, U.S.A.*

### ***Description***

STC and Traffic Systems and Technology have furnished a specialty AC-powered system for industrial/facility traffic control at Walter Reed Medical Center II. The project: a lane control system for the two gates on the new Walter Reed Medical Center II located adjacent to Bethesda Naval Hospital in MD. The project included 14 lane control indications, all 12-inches with a red X and green arrow in the display. All control is done with a custom lane control unit which includes a color touch screen for management of the system.



*The new Walter Reed Medical Center II*

As one enters the facility through the main gate, there is a span wire assembly with four double-sided 12-inch lamps. The user then approaches an entry gate structure and is faced with four additional lane control signals on both sides of the structure. As the user leaves the entry gate onto the facility, the road narrows by one lane and there is another span wire installation with three back-to-back 12-inch signals.

All signals show one of three states: solid red X, flashing red X or a green arrow depending on the operating state of the gate. In standby mode, lanes which are open will show a green arrow; lanes which are closed will show a red X. Lanes open for entry will show a red X on the back side of the green arrow thus allowing traffic to flow in only one direction. One lane is configured as an exit lane in standby and shows a red X to the entering traffic and a green arrow on the back side to exiting traffic. One lane is red in both directions in standby as traffic volume does not warrant all four lanes passing traffic in the standby mode. In standby mode two lanes are set as entry and one as an exit.



There are two peak flow periods. One in the morning and one in the evening. During the AM rush three lanes are set as entry lanes. Since two lanes are normally entry lanes, the third closed lane changes to an entry lane showing a green arrow to entering traffic. Since the lane started out as a closed lane, there is no transition period necessary. The AM peak flow mode is triggered by an output from a nearby traffic control cabinet via a 120VAC signal. The AM peak flow mode can also be invoked through a password-protected button on an override screen. Override mode allows operation in only for 30 minutes and the system reverts to the standby mode.

At the end of the AM peak flow, the third entry lane changes from a green arrow to a flashing red X. This mode indicates to users that the lane will close shortly and vehicles should not queue up for entry to the facility. Upon a pre-programmed time interval the lane changes from flashing red X to a solid red X indicating the lane is closed.

The PM peak mode is more complex as some lanes transition from entry to exit and back again. In standby, there are two entry lanes, one closed and one exit. During PM peak most cars are exiting the facility so three lanes become exit lanes. The standby entry lane transitions from a green arrow to a flashing red X. Once the flashing interval is complete, the lane goes into the red clear transition mode. Each mode can last a minimum of 60 seconds and can be adjusted to as long as 90 seconds on a password-protected screen. During the red clear period an override button is enabled on the lane status screen allowing an operator to press the button and lengthen the red clear interval if needed. Once the red clear interval is complete, the lane changes to an exit lane showing a solid red X to entering vehicles and a green arrow to exiting vehicles. A similar transition occurs at the end of the PM peak when two of the exit lanes transition back to a closed lane in standby and an entry lane.

The project required a custom control to manage the functions and to interface to the traffic control cabinet which is located at the guard station at the main entry. The control included programmable logic with a custom program along with a color touch screen display with multiple levels of information, some with password protection to limit access. STC designed the system to have an All Red override condition in the event of an emergency so all lanes can be closed.

A second system configured for use on a three lane gate was also provided to the Navy for the facility. The sale of the equipment and local support was provided by Traffic Systems and Technology of Manassas, VA. Installation work was completed by Dynalectric of VA.

Traffic Systems and Technology has provided quality products in the traffic and lighting markets since 1984 and operates as a manufacturer's representative and a distributor. For more information: [www.tsandt.com](http://www.tsandt.com)

**For more information:** Solar Traffic Controls, LLC • 1930 East Third Street, Suite 21 • Tempe, AZ 85281-2929 USA  
Tel: 480.449.0222 • Fax: 480.449.9367 • [info@solar-traffic-controls.com](mailto:info@solar-traffic-controls.com) • [www.solar-traffic-controls.com](http://www.solar-traffic-controls.com)