

## John Heneghan

---

**From:** John Heneghan [John@JKHeneghan.com]  
**Sent:** Monday, June 20, 2011 12:45 PM  
**To:** 'Michael Smith'; 'Sharon Lowery'  
**Cc:** warren.hutmacher@dunwoodyga.gov; 'Council Members'  
**Subject:** Crosswalk across Tilly Mill at Binghampton Dr & Lost Mine Trail  
**Attachments:** GA LGS City of Buckley 062011-182.pdf; W11-2 Ped Sign.pdf; Bondo Spec sheet.pdf; Spec001\_revD\_LGS-9X.PDF; Spec002\_revC\_LGS-SD-10-C.PDF; Spec004 revC LGS-PCU-AC.PDF; Spec007 revD LGS PBA.PDF; Sole Source Justification.pdf; Choosing your equipment.pdf; Hardwired Is Better than Wireless .pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Michael,

As we discussed on the phone earlier today, we are scheduled to be repaving Tilly Mill near the south border and I wanted to formally request your analysis for a crosswalk be installed across Tilly Mill at Binghampton Dr & Lost Mine Trail. The Dunwoody North Neighborhood on the East Side of Tilly Mill residents utilize Chesnut Charter Elementary School, Peachtree Charter Middle School and the Dunwoody North Driving Club swim tennis facility on a regular basis yet there are only three places to safely cross the street, they are PTIB, Peeler and Andover / Dunkerrin Lane. I would be proposing another cross walk across Tilly Mill at Lauralwood but there is no sidewalk yet on Till Mill to receive the foot / bicycle traffic and access is needed near Stonington more than anywhere else; therefore my request at Binghampton.

I am well aware that the Binghampton location is not ideal for a crosswalk as it is at the top of a hill and slightly around the curve but that being said now is the time to engineer a safer solution to allow improved pedestrian traffic flow. Besides just crosswalk paint, I would welcome your analysis of the other safety improvements needed for this intersection such as the LightGuard system that I have attached. As I told you on the phone, I believe that paint alone would not be enough.

Could you please do the analysis of the Tilly Mill at Binghampton Dr & Lost Mine Trail intersection to determine feasibility as well as possible safety improvements that might greatly improve the pedestrian safety of this intersection?

Since are also [paving Roberts in front of Austin Elem.](#), I would welcome discussion as to whether this type of solution should be implemented in the construction phase there too.

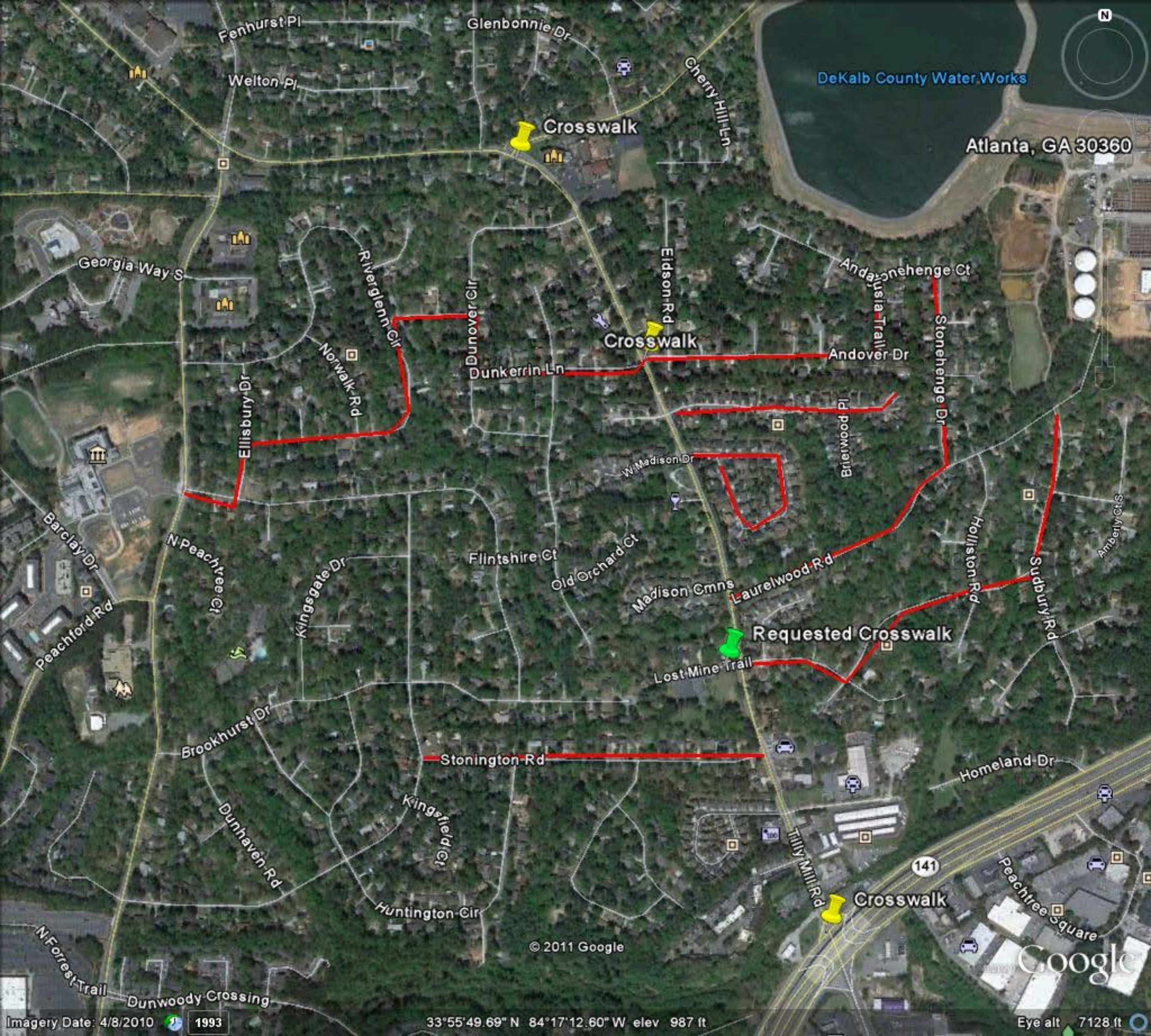
I have attached documentation as to what I believe would be the correct solution for crosswalk safety within the City limits which has an estimated hardware cost below \$15,000 and would like to test this solution at Tilly Mill & Binghampton.

As a final thought, if the DeKalb County School System were to pull crossing guards, this is the type of solution I would like to implement for all schools, especially those on main roads (Chesnut, Austin, and DES).

Sharon, could you please put the Tilly Mill at Binghampton crosswalk on the work session for July.

Thanks,

John Heneghan  
Dunwoody City Council  
4624 Buckley Court  
Dunwoody, GA 30338  
H 770-234-0678



DeKalb County Water Works

Atlanta, GA 30360

Crosswalk

Crosswalk

Requested Crosswalk

Crosswalk

© 2011 Google

Google



2292 Airport Blvd.  
Santa Rosa, CA 95403  
Phone (707) 542-4547  
Fax (707) 525-6333

<b>Quotation</b>	<b>Quote #</b>	<b>062011- 182</b>
------------------	----------------	--------------------

**PRICING IS A " BUDGETARY ESTIMATE " FOR A  
TYPICAL 2 LANE CROSSWALK LAYOUT**

**SUBMITTED TO:**

John Heneghan  
City of Dunwoody  
4624 Buckley Crt  
Dunwoody, GA, 30338  
Office 770-234-0678  
Fax Customer FAX  
john.heneghan@dunwoodyga.gov

**Reference:** City of Dunwoody

**MSRP**

Date:	Shipment:	Terms and Conditions:	Salesperson
6/20/2011	FOB Santa Rosa	50/50 Discount pricing SEE NOTE 6	Sher Paz

Item	QTY	Model Number & Description	MSRP Total
1	10	LGS-9X-3/SD10-C Amber LED Signal Head w/ 10" Composite Base Plate	\$ 6,000.00
2	6	LGS-BONDO Two Part Epoxy for Securing Base Plate Into Roadway (pass thru item)	\$ 780.00
3	2	LGS-W54A/W11-2-B Ped Sign w/o Crosswalk Lines & LED Enhanced Border	\$ 1,590.00
4	1	LGS-PCU-AC Std A/C PCU w/Programmable Interface, Batt. Backup, Backpan & Cabinet	\$ 3,610.00
5	1	LGS-PBA-PAIR ADA 2" Push Button Assembly w/LED Placard - Pair (L & R)	\$ 750.00
6	1	LGS-SHIPPING Estimated Shipping & Handling Charges	\$ 330.00

Total Including Shipping & Handling \$ 13,060.00

**Notes:**

- 1 See attached Terms and Conditions.
- 2 This offer excludes the following, but is not limited to: installation, poles, wire, miscellaneous mounting hardware, applicable sales tax, drawings, bonds, fees, permit fees or any other added fees.
- 3 This product complies with U.S. Patent no. 6,384,742 awarded to LightGuard Systems, Inc. Use license is authorized for each system purchased.
- 4 LGS-BONDO is Pass Through Item Only
- 5 Delivery 6 to 8 weeks After Receipt of Order (ARO) - Subject to CHANGE due to parts availability
- 6 **PAYMENT TERMS: 50% Due Upon Order 50% Due Upon Completed Order Ready To Ship. 50/50 terms are our best pricing and represent a 4½ discount off our standard prices. If you choose different terms, upon approval of credit, up to 4½ percent will be added to the invoice items.**

**Sher Paz**

Sher Paz  
Authorized Sales Agent

Date: June 20, 2011

(Quote tool version 2v37)

## LIGHTGUARD SYSTEMS, INC. TERMS AND CONDITIONS

1. **LGS Proprietary Status:** LGS is the owner and supplier of a pedestrian crosswalk warning system ("System") protected by U.S. Patent Numbers. 6,384,742 & 6,597,293 & 6,683,540. The System is designed for alerting motorists that they are approaching an occupied crosswalk, or controlled intersection, or rail grade crossings. The System is also referred to as the "LightGuard Systems®", "Smart Crosswalk"™ pending, and the "Pedestrian Crosswalk Warning System". The System consists of flashing light emitting diodes (LED) lights and activating equipment. The System is designed for installation at crosswalks and other roadway crossings.
2. **Approved Uniform Traffic Control Device:** The System has been approved as an In-Roadway Warning Light (IRWL's) device in the millennium edition of the Federal MUTCD manual Sec.4L).
3. **Written Modification of Terms or Change Orders:** This agreement may not be modified in any manner without the prior written consent of LGS. Notwithstanding delivery of the items identified herein, no terms or conditions in oral or written communications from BUYER (including the BUYER'S Purchase Order or other forms) shall be binding on LGS unless specifically accepted in writing and signed by LGS.

4. **Price Changes:** All prices are net of any applicable taxes and are subject to change without notice.

5. **Taxes:** Applicable taxes will be added to the purchase of the System unless BUYER provides LGS with, at the time of order placement, tax exemption certificates acceptable to LGS for this transaction from the appropriate taxing authorities exempting BUYER from added tax.

6. **Warranty:** LGS warrants to BUYER for a period of twenty-four (24) months from the date of shipment to BUYER, pursuant to BUYER'S order, that the System shipped and furnished conforms to final LGS specifications and is free from defects in workmanship by LGS. LGS further warrants that the signal head will function normally for a period of thirty-six (36) months (visible to the motorist from normal viewing distances of 200 feet to 400 feet, average, day or night) and not more than four individual LED's become inoperative. Warranty does not cover light condensation/moisture, scratches, hazing or sun degradation to polycarbonates, poor installation technique, or damage from improperly maintained street sweeping equipment.

BUYER shall provide supervision of installation in strict conformance with LGS recommended guidelines as set forth in the LGS Installation Manual available on-line (includes re-torque of signal heads within the specified time period) then in effect by LGS from date of delivery. BUYER shall be solely liable to third parties for the condition of the System as installed. LGS is not, and shall not be, responsible for express or implied warranties, or other remedies which differ from those stated herein. BUYER agrees to save and hold LGS harmless from any, and all, liability, loss, cost, and expense, including attorney's fees arising out of, or in connection with, any BUYER offered warranties.

**Therefore, except to the extent of the warranty stated herein, LGS Disclaims all Warranties, whether express or implied, and specifically DISCLAIMS all implied warranties of merchantability and fitness for a PARTICULAR PURPOSE. In no event shall LGS be liable to BUYER in WARRANTY, contract, negligence, strict liability or otherwise for any damages, whether incidental or consequential, which are alleged to be caused by one or more of LGS PRODUCTS. BUYER'S sole and exclusive remedy against LGS for breach of warranty, breach of contract, negligence, strict liability, or otherwise, shall be for REPAIR or replacement of the subject product (excluding installation and removal CHARGES, which shall be BUYER'S RESPONSIBILITY) or LGS may refund the purchase price at the sole option of LGS which such EXCLUSIVE remedy shall expire two years from the date of shipment by LGS of the goods.**

7. **Repair and Replace:** All sales are final. In some cases where returns may be permitted at the sole discretion of LGS, after receipt by LGS of written notice from BUYER of a defect in a component, the responsibility of LGS is limited to replacement or repair at the place designated by LGS of any component or components which have been returned to LGS by BUYER, and which LGS determines to be defective, or which do not conform to the system shipped, provided that such component or components are returned by BUYER within ninety (90) days after notice of such defect is received by LGS. Components replaced or repaired within the warranty period shall carry the unexpired portion of the original warranty from the date of receipt of the report of the defect. Warranty services will be provided during normal LGS business hours. BUYER agrees to pay LGS for services required to be performed outside normal business hours, or for additional costs incurred by LGS, in order to comply with local labor contracts.

All components returned by BUYER for repair or replacement must be sent freight prepaid to the address designated by LGS and will be returned to BUYER freight prepaid. BUYER must obtain a Returned Materials Authorization (RMA), signed by LGS, prior to returning any part(s).

Warranty is **NOT** valid unless BUYER complies with conditions set forth in this paragraph. LGS is not liable for any damage done by unauthorized repair, replaced components, from any misapplications of the component, or for damage due to shipping, accidents, abuse, negligence, or acts of God. In no event shall LGS be liable for loss, damage or expense directly or indirectly arising from the use of the System, or from any other cause, except as expressly stated in this warranty.

8. **Special Damages:** LGS is not liable for, and BUYER expressly waives any right of action it has or may have against LGS for, any consequential or special damages arising out of any breach of warranty express or implied. LGS will not be liable for payment of any labor subcontracted or performed by BUYER for preparation of System under warranty for return to LGS or for work for field repair or replacement. LGS shall not honor any invoice from any source for either labor performed or subcontracted by BUYER.

9. **Condition of Warranty:** Any obligation of LGS under its warranty policy is expressly conditioned upon the timely receipt of all payments from BUYER in strict compliance with payment terms. Time is expressly made the essence of this contract and specifically with to respect to payment obligations of BUYER. Failure of BUYER to timely pay for the System suspends the warranty obligations of LGS. The expiration date of the warranty shall not be extended upon payment of any overdue amount. BUYER shall not withhold payment of invoices pending settlement of claims. This warranty, and any condition to this warranty, may be modified only in writing and signed by an authorized representative of LGS and shall extend only to BUYER.

All LightGuard Systems Inc. products are designed to function/operate as an integrated system. LightGuard Systems does not warranty or otherwise guarantee any of its products to function/operate or to provide any level of safety when directly integrated with or connected to other product line or un-authorized or un-tested products or systems. Any deviation of use not consistent with the LightGuard Systems inc. Installation Manual or guidelines will void any and all written or implied warranty(s).

10. **Accessories and Buy Out Items:** Any accessories, and "buy out items", which are defined as components to System (e.g. batteries) and supplied by LGS but manufactured by others, carries only any warranty such manufacturer thereof has made to LGS and which by its terms specifically extends to BUYER.

11. **Indemnity:** BUYER agrees to save and hold LGS harmless of and from any and all, liability for the System, including attorney's fees and costs of defense, after delivery to BUYER by LGS, installation by BUYER, and use by City, or other entity, as installed.

12. **Jurisdiction and Venue:** Any questions, claims, disputes or litigation, arising from or related to BUYER'S Purchase Order shall be held in Sonoma County and governed by the laws of California without regard to the principles of conflicts of law. Any and all disputes arising between the parties shall be resolved in the following order: 1) By good faith, negotiations between the representatives of LGS and BUYER who have authority to fully and finally resolve the dispute; 2) If necessary, by non-binding arbitration in Sonoma County, California. The arbitration will comply with, and be governed by, the provisions of the California Arbitration Act, sections 1280 through 1294.2, of the California code of Civil Procedure; 3) The parties will each appoint one person to select a third impartial arbitrator to hear and decide the dispute. The cost of arbitration will be borne in proportion the arbitrator shall determine. The prevailing party in any proceeding shall be entitled to recover attorney's fees and costs therein incurred.

13. **Validity:** If any provision of this Agreement shall be held to be invalid, or unenforceable, the same shall not affect in any respect whatsoever the validity or enforceability of the remainder of this Agreement.

14. **Credit Terms:** - PLEASE CALL FOR SPECIAL TERMS DIFFERENT FROM NOTE 6.

14. **Finance Charges:** Accounts delinquent 30 days or more will incur a finance charge of 10% per annum.

16. **Freight:** All prices are F.O.B. Santa Rosa, CA. Routing and means of transportation will be "Best Way" (transportation carrier may be arranged by LGS).

17. **Minimum Order:** The minimum acceptable order is twenty-five hundred dollars (\$2500.00) list price, except for replacement parts at one hundred fifty dollars (\$150.00).

18. **Quotations:** All quotations, bids, contracts, & orders, are subject to a final written approval or acceptance and acknowledgement by LGS. Quotations will be firm for 30 days from date of submission by LGS.

19. **Cancellation Charges:** All acknowledged orders are subject to a cancellation charge of up to the price of the goods.

20. **Estimated Delivery Dates:** Delivery: Ten - twelve (10 -12) weeks ARO (after receipt of written order) however, LGS shall not be liable in any respect for failure or delay in the fulfillment, or performance, of this contract if hindered or prevented, directly or indirectly, by war; conditions of wars, acts of enemies; national emergency; sabotage, revolution or other disorders; inadequate transportation facilities; inability to secure raw materials or supplies, fuel, or power; fire, flood, windstorm, earthquakes or other acts of God; strikes, lockouts, or other labor disputes; orders or acts of any government or governmental agency or authority; interference by Civil or military authority; or any cause of like or different kind beyond the reasonable control of LGS.

21. **Workmanship:** All work by LGS to be completed in a workmanlike manner according to standard industry practices. Any alteration or deviation from the System as described herein is strictly prohibited unless specifically authorized by LGS in writing in advance thereof. Such authorized alteration or deviation will be executed only upon prior written orders and will become an extra charge over and above this formal quotation. LGS shall not be responsible for any delays due to alterations, deviations, strikes, acts of God, or other circumstances beyond the control of LGS. LGS reserves the right to substitute components in the System it deems comparable due to unavailability or unexpected delays in receipt of components from LGS vendors. LGS reserves the right to change without notice, details or specifications in product design. Product use certifies agreement to LGS terms and conditions.

22. **Solar Powered Systems:** These are designed to operate within the performance characteristics outlined in the attached solar calculation worksheet. If the actual electrical load exceeds that noted in the worksheet (% daily power consumption), then the customer is responsible to increase the power via additional solar panels &/or batteries as required.)



## Features/Benefits

- 16 LED Module Signal Lights
- "Dove Prism™" Lens Technology
- Easily Mounts To Roadway Base
- 12VDC Operation (Down To 9VDC)
- Visible to 1,500 Feet From Signal Head
- Rugged, Reliable, With Little Maintenance
- Snap Together, Waterproof Electrical Connection

## IN-ROADWAY WARNING LIGHTS (IRWL)

### Signal Head Series 9X

**LightGuard Systems Part Number: LGS-9X**

**Description:** The signal head contains the in-pavement LED light module.

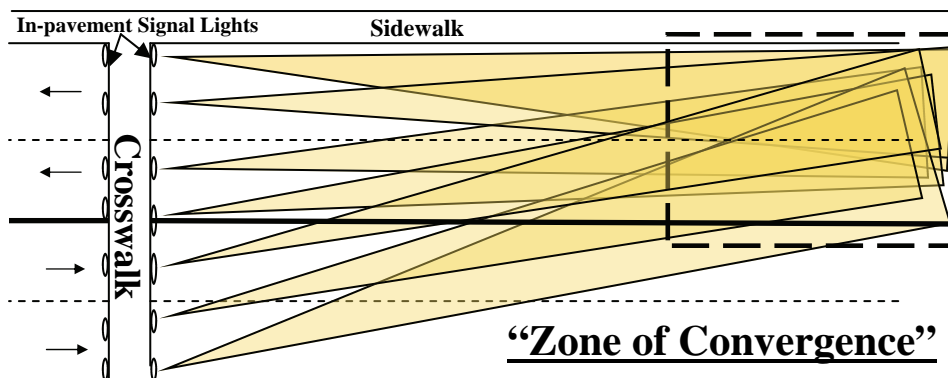
**Compliant to FHWA Standards: MUTCD Chapter 4, Section N**

### Application Notes

LightGuard Systems' newest technology is our System 9X LED dubbed "LightStar™." The In-Roadway Warning Light (IRWL) signal head module meets Federal Highway Administration — Manual on Uniform Traffic Devices (FHWA MUTCD) standards. The signal head module features a watertight cable connector, solid-state electronics and sealed LED modules which isolate the electronic components from environmental moisture intrusion. The "Debris Free™"- Self Clearing Design eliminates most issues relating to lens blockage.

The signal head is designed to tightly fit into the protective base plate. It is easily connected to the electrical cable system wires with snap together, water tight connectors. The interior of the signal head unit is designed with double redundancy, isolating the solid state LED modules from roadway moisture and corrosive intrusion. The signal head unit is fastened to the base plate with stainless steel socket head ¼"-20 screws with thread locks and anti-seize compound applied to the threads in the factory.

Typical IRWL system use employs several signal heads on both side of the crosswalk using the **Enlighten1™** flash rate operating at a 50% duty cycle. The flashing light beam can easily be seen in daylight from 200 to 600 feet (or more) away and at night up to 1,500 feet (or more) away.



The **Enlighten1™** flash rate was developed in cooperation with University of California, Berkley Vision Detection Laboratory, specifically to capture and hold driver awareness.

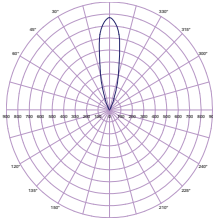
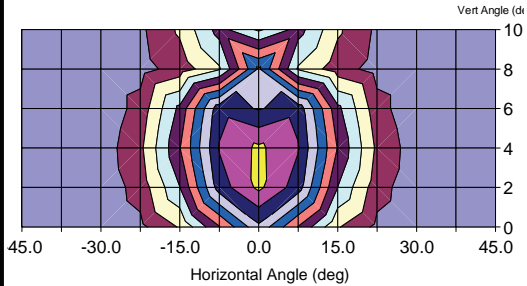
The "Zone of Convergence" refers to the area in the traffic lanes where specialized lenses direct beams of bright light from the signal head LED light modules to merge.

This "zone" is configured to give the driver adequate time to react to the presence of a pedestrian in the crosswalk. During installation the signal head modules must be properly positioned and directed towards the approaching motorist.

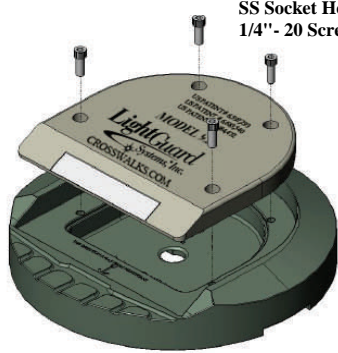
The chart on the left provides details for determining the "Zone of Convergence" based on the stopping distances on dry road conditions and rate of vehicular speed. Source: Santa Rosa, California City Police Department 1994.

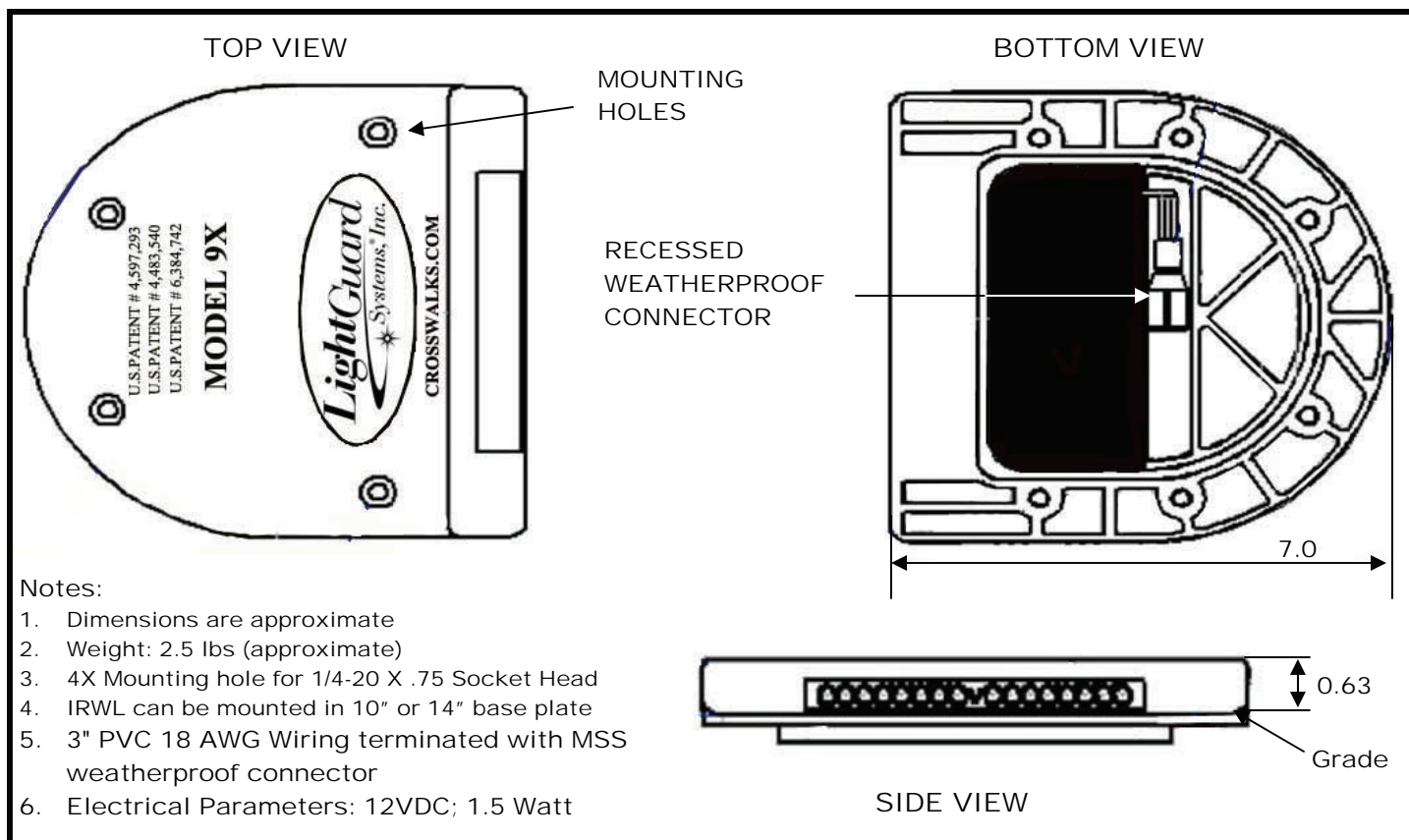
Posted Speed Limit	1 Second Reaction Time	Braking Distance	Total Stopping Distance
25 mph	37 feet	53 feet	90 feet
30 mph	44 feet	81 feet	125 feet
35 mph	51 feet	110 feet	161 feet
40 mph	59 feet	143 feet	202 feet
45 mph	66 feet	184 feet	250 feet
50 mph	73 feet	227 feet	300 feet
55 mph	81 feet	271 feet	352 feet
60 mph	88 feet	323 feet	411 feet

## General Performance Specifications

Parameter	Value	Intensity Profile	Photometric Plot
Visibility	$\pm 22.5^\circ$ Horiz $+10^\circ$ Vert		<b>9B-C Photometric Data (Amber 594nm) Lumens</b>  <b>Maximum value @ center 815 Lumens</b> <b>12 LED Lamps per light fixture</b>
Operating Temp	$-20^\circ$ to $+80^\circ\text{C}$		
Operating Voltage	9VDC to 15VDC		
DC Current @ 12VDC	0.2 Amps		
Avg Power Dissipation	2.5 Watts		
Luminous Intensity	252,000 mcd		
Material	Polyurethane/Nylon		
Color	Black		

## Model # Reference Table

LGS P/N	Description	LED Color	Typical Mounting
LGS-9X-1	In Roadway Warning Light: Red	Red	
LGS-9X-2	In Roadway Warning Light: Bi-color	Red/Amber	
LGS-9X-3	In Roadway Warning Light: Amber	Amber	
LGS-9X-4	In Roadway Warning Light: White	White	
LGS-9AX-3	In Roadway Warning Light: Amber With Sloped Edge For System 6 Base Plate	Amber	





### Features/Benefits

- Secures to Roadway
- Sloped Edged to Signal Head
- Easy to Install Into Pavement
- Maintenance Free Operation
- Simple Electrical Connections
- Self Clearing **Debris Free™** Design
- Adaptable to Tamper Resistant Hardware
- High Strength Impact Resistant Composite

## Standard In-Roadway Warning Light Base Plate

**LightGuard Systems Part Number: LGS-SD10-C**

**Description: 10" Composite Base Plate**

**Compliant to FHWA Standards: MUTCD Chapter 4, Section N**

### Application Notes

The SD10 mounting base plate is used to secure and protect In Roadway Warning Lights (IRWL) module. The dimensions of the base plate are approximately 10" diameter and 1½" depth. The shallow depth prevents penetration into the lower roadbed thereby preserving the structural integrity of the roadway. A two part epoxy compound is used to permanently embed the base plate into the roadway.

The base plate interior cavity is designed to contain the wiring cable for the IRWL module. An elastomer O ring found on the signal head module tightly fits into the base plate horseshoe shaped lip, creating a seal interface between the signal head module and the base plate.

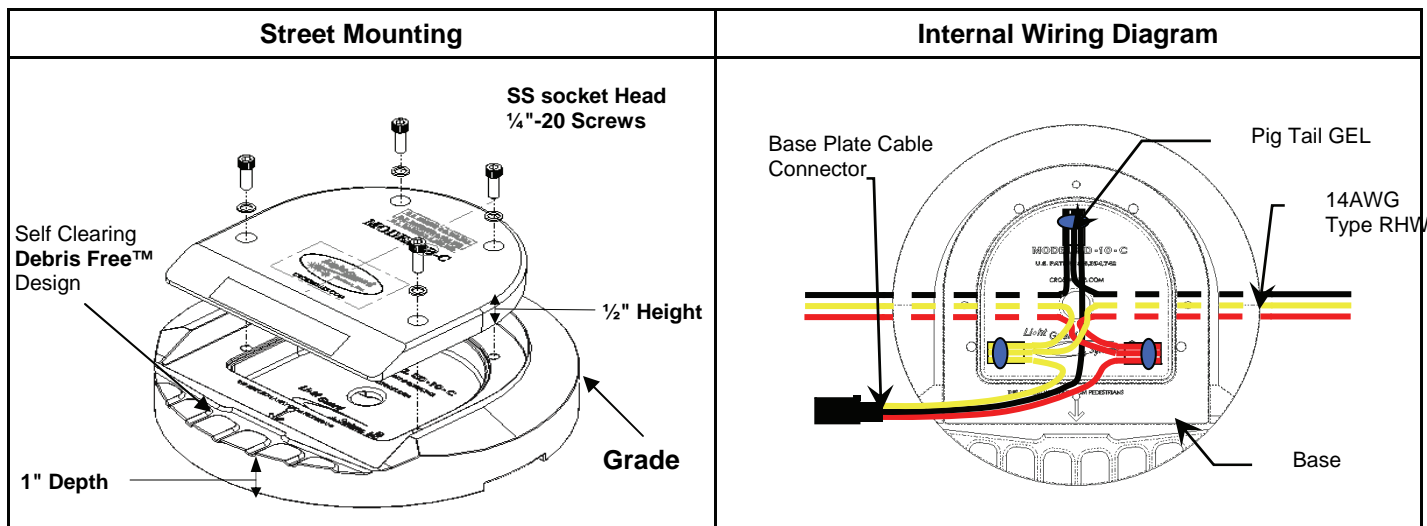
The IRWL signal head is fastened to the base plate with stainless steel socket head ¼"-20 screws that are lubricated in the factory with thread lock, anti-seize compound.

The base plate can be installed directly into asphalt or concrete roadbeds. The electrical conductors are embedded in the road bed via direct burial or in conduit.



### General Performance Specifications

Parameter	Value
Operating Temp	-20° to +80°C
Material	High Strength Composite
Color	Black
Size	9 7/8" diameter, 1 3/8" deep





*"Pursuing Safety Through Technology"*

## **PRODUCT SPECIFICATION SHEET**

*Item Name:*

### **ACTIVE PEDESTRIAN CROSSING SIGN**

Description: These LED active signs are placed adjacent to the crossing location to provide additional warning to approaching motorists and flash when system is activated. NOTE: This LED enhanced sign should only be used in conjunction with an in-roadway LightGuard System. Stand-alone flashing operation use is prohibited.



***LIGHTGUARD P/N: LGS –W11-2***

(with mounting kit)

<b>Size:</b>	<b>30" x 30" approximately</b>
<b>Type:</b>	<b>W 11-2 or W 54-A</b>
<b>Color:</b>	<b>Standard fluorescent-yellow-green</b>
<b>Lighting:</b>	<b>Amber LED's that flash with system activation</b>
<b>Input Voltage:</b>	<b>12.5 volts DC (not to exceed 15v)</b>
<b>Power Dissipation:</b>	<b>1.5watts at 50% duty cycle</b>
<b>Mounting:</b>	<b>Bracket assembly provided w/tamper proof hardware (see local agency standards for mounting details)</b>
<b>Application:</b>	<b>To be used as a supplement to in-roadway system</b>

***Spec #009 revision B***

***Sheet 1 of 1***

Copyright © 2004 LightGuard Systems, Inc. All Rights Reserved



### Features/Benefits

- Battery Back-Up
- Lightning Surge Protection
- Available With Upgrade Kits
- Lockable Weatherproof Cabinet
- Internal Branch Circuit Protection
- 120 VAC Single Phase or 240 VAC Two Phase

## Smart Crosswalk™ Power Control Unit (PCU)

**LightGuard Systems Part Number: LGS-PCU-AC**

**Description: Standard AC PCU with Programmable Interface**

### **Application Notes**

The power control unit (PCU) accepts call signal inputs from either a manual pedestrian push button device or an automatic pedestrian activation detector to initiate the Enlighten1™ flashing light sequence thereby visually alerting motorists to the presence of pedestrians entering the crosswalk. The flashing sequence is activated for a factory preset (field adjustable) duration to allow pedestrians adequate street crossing time.

The programmable control unit user interface has a 16 digit keypad. There is also a 2 line-20 character liquid crystal display supported by a 2 megabyte external memory. The programmable control unit is based on a high-speed 8 bit embedded microcontroller utilizing compiled machine control language. LightGuard proprietary software provides effective reliable operation allowing the user to make adjustments to the system parameters.

The microprocessor interface allows for multiple option selections, data collection, and preset programming. PCU memory contains a limited number (approximately 65,000) of "date/time stamped" activation counts, diagnostic and power-up events. The PCU is capable of data transfer and remote communication via the PCU RS232 serial port.

Factory installed battery backup ensures continual system function during power outages. The 12 volt DC sealed lead-acid battery is rated at 12 Ah @ 20 hour rate ensuring system operation.



### **General Performance Specifications**

Parameter	Value
Power Consumption	1 Watt (In Standby Mode)
Operating Temp	0°C to +50°C
Input Operating Voltage	120 VAC or 240 VAC
Input Current Protection	5A Fast Acting (2 Pole Circuit Breaker)
Input Surge Suppression	3000 Joules Per Pole, 100,000 Amps
Output Operating Voltage	13.5 VDC to 15VDC
Output DC Load Max	10 Amps
Enclosure Type	NEMA 6 Fiberglass W/Padlock Latch
Enclosure Color	White (Standard)
Enclosure Size	18" x 16" x 8"
Battery Backup	12AH SLA

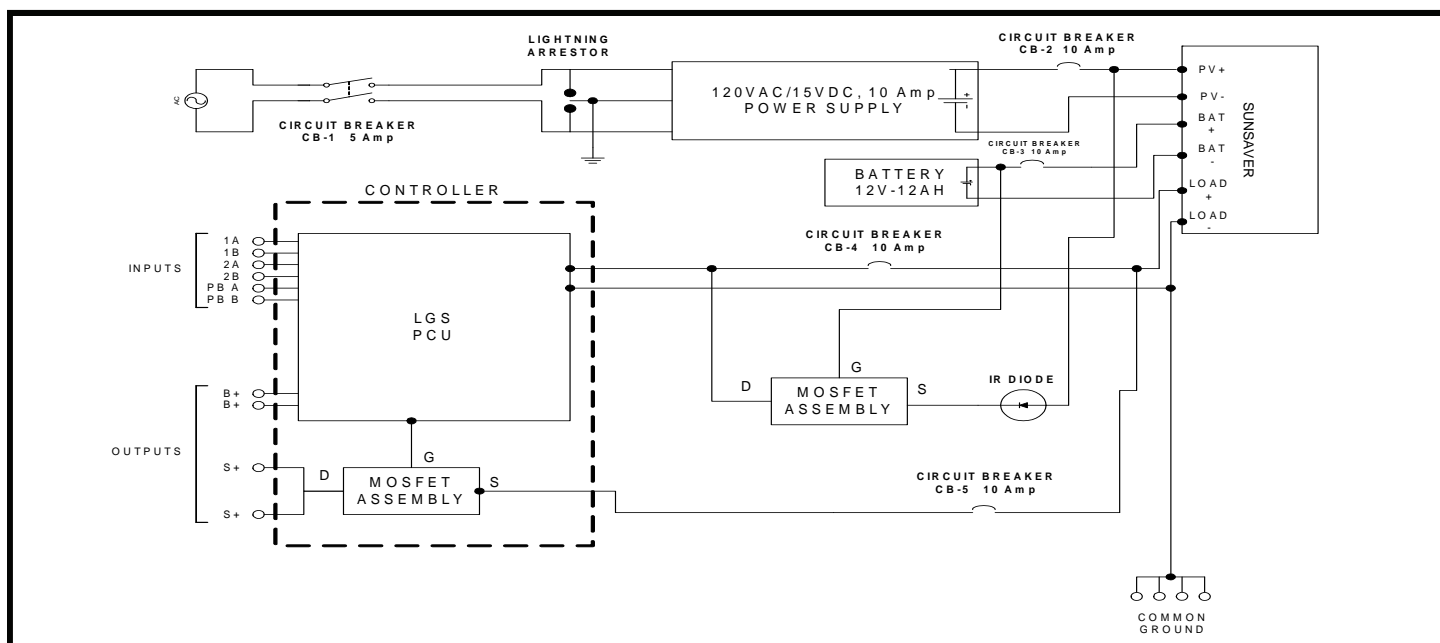
### **NO ENCLOSURE**

**LightGuard Systems Part Number: LGS-PCU/BKPN-AC**

**Description: Standard AC PCU with Programmable Interface**

The Standard AC PCU incorporates the same features without the enclosure.

# Internal Wiring Diagram



## Pole Mounting Enclosure With Hardware

NEMA 6 FIBERGLASS  
ENCLOSURE

ALUMINUM  
UNISTRUT

CLAMP TO FIT  
POLE DIAMETER

STAINLESS STEEL  
HARDWARE

