ENHANCING RED LIGHT COMPLIANCE WITH TECHNOLOGY

Road School 2015
Today's Agenda

• The Problem
• The Solution
• A Strategy
The Problem:
Right Angle Collisions at Signalized Intersections

- Maim and Kill
- Increase Agency Operating Costs
- Increase Motorist Costs
- Create Negative Intangibles
Solution:

• Improve Red Light Compliance
Possible Solution Strategies

• Engineering
• Enforcement
• Education
Current Practice Solutions

• Use Crash Statistics to Diagnose
• Apply Countermeasures Based on Engineering Judgment
• And/Or Apply Periodic Enforcement
Enhanced Solution

- Use Crash Statistics to Identify Problem Intersections
- Use Crash Statistics to Identify Right Angle Patterns
- Record Red Light Running Activity
- Diagnose Using RLR Event Data
- Implement Countermeasures
- Re-measure, Try Something Else, and Repeat as Needed
- And/or, Use RLR Data to Focus Enforcement
Demonstration of an Enhanced RLR Tool
Example Diagnostic Approach

Depth of Red

One Second Vehicle Bins
Strategy

• Seek LTAP Assistance
  – Routinely Scan for Problem Intersections
  – Develop Crash Report

• If Solution is Obvious, Then Apply Countermeasures
  – Watch Crash History

• If Solution is Evasive, Then use Technology to Drill Deeper
  – Apply Countermeasures and Re-measure RLR's
  – Repeat as needed Until All Countermeasures are Exhausted

• If No Solution, Then Apply Enforcement
  – Use Technology to Focus Enforcement Resources
Benefits

• Rapidly Assesses Countermeasures
• Systematically Reaches the Most Affordable Solution
• Reduces Unnecessary Operational and Societal Costs
• Optimizes Targeted Enforcement (If Needed)
• Does Not Require Legislation
• Results Can be Validated in Weeks or Months, not Years
Contacts

Bob McCullouch Ph.D. P.E.
Indiana LTAP Program Manager
765.496.6584
bgm@purdue.edu

Laura Slusher, PE
HELPERS Project Manager, Indiana LTAP
765.494.7038
lslusher@purdue.edu

Dan Shamo, PE
Senior ITS Engineer
317-532-5423
dan.shamo@aecom.com