

NATIONAL ROAD SAFETY AUDIT PEER EXCHANGE Charleston, South Carolina

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"ROAD SAFETY AUDIT"

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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION



HISTORY:

PENNDOT

- ■IN APRIL, 1997 PILOT PROJECTS ESTABLISHED IN DISTRICTS 6-0 & 10-0
- AS A RESULT OF THE PILOT PROJECT SUCCESS, SAFETY AUDIT INNITIATIVE EXPANDED TO ALL DISTRICTS
- BHSTE CONDUCTED SAFETY AUDIT TRAINING FOR THE DISTRICTS IN 1999
- THERE HAVE BEEN OVER 40 ROAD SAFETY AUDITS COMPLETED TO DATE



BASIC QUESTION:

- * "STRICT ADHERENCE TO STANDARDS AND GUIDELINES MAY NOT ALWAYS BE ENOUGH"
- † "THERE MAY BE A NEED FOR FORMALIZING A PROCEDURE FOR SAFETY EVALUATIONS TO ENSURE CONSISTENCY, SO THAT SAFETY IS BUILT INTO TRANSPORTATION FACILITIES FROM THE START"

Safety A

Highway Safety Audit

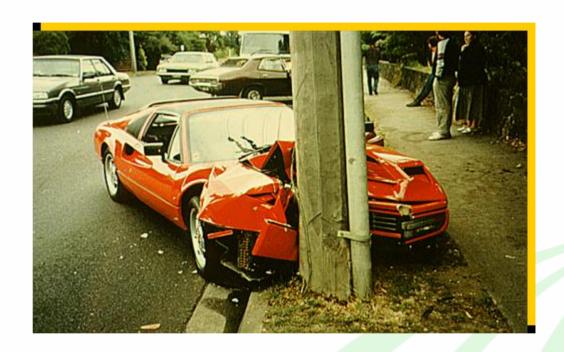












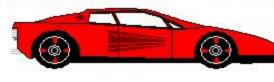
-Economic loss for a death in a crash is \$3,278,600 based on PENNDOT estimates (in 2005 dollars)







Vehicle 5-7%



Driver 85-90%

Roadway 5-7%



BASIC QUESTION:

†UTILIZES EXPERTISE FROM:

- PEDESTRIAN / BICYCLE
 COORDINATOR
- **THUMAN FACTORS EXPERT**
- **MOTOR CARRIER SAFETY**
- EXPERTS FROM OTHER DISTRICTS & AGENCIES



BASIC QUESTION: WHEN?



- OPERATES THROUGH ENTIRE PROJECT DEVELOPMENT
- FORMAL REVIEWS ARE **CONDUCTED AT VARIOUS STAGES**



KEY ELEMENTS IN PROCESS:

- INTERDISCIPLINARY TEAM
 INDEPENDENT REVIEWS
 COMPREHENSIVE CHECKLISTS
 HUMAN FACTOR CONCERNS
 MULTIMODAL NEEDS
- CONSTANTLY IMPROVING



SEVEN STAGES OF RSA:

STAGE 1 -FEASIBILITY

STAGE 2 - PRELIMINARY DESIGN

STAGE 3 -FINAL DESIGN

STAGE 4 - PRE-OPENING

STAGE 5 - IN-SERVICE or EXISTING ROADWAYS

STAGE 5a - EMERGENCY PAREPAREDNESS

STAGE 5b - HIGH CRASH LOCATIONS



STAGE 5: IN-SERVICE or EXISTING

- ADEQUACY OF ROADWAY, ROADSIDE, & INTERSECTIONS:
 - SIGNS
 - PAVEMENT MARKINGS
 - SIGHT DISTANCE
 - PAVEMENT DEFECTS
 - SKID RESISTANCE

- DELINEATION
- LIGHTING
- CLEAR ZONE
- SHOULDERS
- GLARE
- LOCATIONS OF BUS STOPS
- BICYCLE INTERACTION
- ACCESS MANAGEMENT



Stage 5a EMERGENCY PREPAREDNESS

- SNOW STORM
- ROAD CLOSURE
- UNUSUAL EVENTS



Stage 5b HIGH CRASH LOCATIONS

- PUBLIC INPUT
- •LEGISLATIVE INPUT
- STAKEHOLDERS INPUT
 - 1.Local Police Agency Input
 - 2.EMS Input
 - 3.Fire Dept Input



HOW

- •SET UP OPEN END CONTRACT 5 YEARS, \$2.00 MILL
- •TRAIN/PROVIDE INFORMATION TO CONSULTANT

PENNDOT

- •SET UP SPECIAL FUNDS FOR DISTRICT TO USE RSA CONTRACT
- •MUST PROVIDE BENEFIT OF EACH RSA



BENEFITS

- "THINKING SAFETY" EARLIER
- INTERDISCIPLINARY INPUT
- QUALITY FIELD REVIEWS
- FORCED COMMUNICATION
- PROVIDED ACCESS TO THE DESIGN THROUGH

ALL PHASES OF PROJECT

- Ensure ideas did not get lost
- Changes to provide input
- Better Understand Project
- •PROVIDED SAFETY BEYOND WHAT STANDARDS COULD
 - Closely Scrutinized Changed
- INCORPORATED MANY ADDITIONAL IMPROVEMENTS



BENEFITS

- INTEGRATED SUCCESSES INTO OTHER PROJECTS
- CREATED CONSISTENCY
 - Throughout Other Projects
 - Throughout Adjacent Networks
- •TEAM EXPERIENCED HIGH LEVEL OF SELF-LEARNING
- **•DESIGNERS EXPERIENCED HIGHER LEVEL OF COMPFORT**
- **•CALLED UPON FOR EXPERT ADVICE**
- "QUALITY THROUGH PREVENTION"



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Thank You! Any Questions?