Florida Highway Patrol

Traffic Crash Investigation Process

October 11, 2011

Trooper Receives Call From FMRCC





Trooper Dispatched To Crash Scene

Given Information Regarding Location of Crash, Vehicle Descriptions, Roadblock, and/or Injuries.

Trooper Arrives on Crash Scene

- ** Observes the scene upon arrival
- ** Speaks with Emergency Personnel
- ** Locates witnesses / interviews
- ** Investigates for Impaired Driver
- ** Records roadway evidence
- ** Calls for tow trucks
- ** Completes Crash Report



Observes the Crash Scene



Record Roadway Evidence



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Completes the Traffic Crash Report

Traffic Homicide Investigations



THI Investigates Fatal Crashes





THI Corporals Go Beyond The Crash Report

Tools of the Trade





Utilizing the Drag Sled



Using Drag Sled on Different Surfaces



Multiple Surfaces Have Different Drag Factors

Grass - Concrete - Pavement



THI Equation Handbook

Used for Reconstruction of Traffic Crash

iWitness Photogrammetry



Open Roads Policy



Nitness[™] and iWitnessPRO[™]

he premier close-range photogrammetry oftware for accident reconstruction

In 2002 FDOT / FHP agreed to utilize "close range photogrammetry" as a tool to reduce scene time at crashes

Close Range Photogrammetry allowed troopers to reduce their on-scene time by photographing the crash and later "mapping the crash" using a computer back in the office. Only Corporals have this capability.

Measurements with Camera









Utilizing markers, the iWitness software solves for the camera positions and 3D coordinates the markers to produce an image-based diagram.



Each marker is labeled and measured by the iWitness software to produce marker points for the CAD drawing

iWitness Summary Report

- iWitness Project Summary (25/03/2011 13:05pm)
- Project Name: FHP711-64-001 1.iwp
- Camera name(s): OLYMPUS IMAGING CORP. E-500 (unique ID: A70508025_01-04-11)
- Scale Set?: Yes
- Number of images: 33
- Number of referenced points: 25
- Number of cameras: 1
- Quality of geometry: 1.0 (good)
- Minimum number of points on an image: 0 on image: P1051661.JPG P1051662.JPG
- P1051663.JPG P1051664.JPG P1051666.JPG P1051667.JPG P1051668.JPG P1051669.JPG
- P1051670.JPG P1051671.JPG P1051672.JPG P1051673.JPG P1051674.JPG P1051675.JPG
- P1051676.JPG P1051677.JPG P1051678.JPG P1051679.JPG P1051680.JPG P1051681.JPG
- P1051682.JPG P1051683.JPG P1051684.JPG P1051685.JPG P1051686.JPG P1051687.JPG
- P1051688.JPG P1051689.JPG P1051690.JPG
- Minimum point intersection angle: 3 degs for point: 25
- Number of points referenced on:
- 2 images only: 0
- 3 or more images: 25
- 4 or more images: 12
- 6 or more images: 0
- Estimated accuracy of 3D point coordinates (RMS 1-Sigma):
- X: 0.0632 feet, or 1:2600
- Y: 0.3392 feet, or 1:400
- Z: 0.0159 feet, or 1:10600
- Overall: 0.1394 feet, or 1:1200
- Estimated accuracy of image referencing: 0.48 pixels
- Quality of self-calibration (if applied): N/A
- 3D coordinate text file: Control1.txt
- 3D coordinate DXF file: Network1.dxf

Summary Report Transferred to Crash Zone







Completed diagrams are then digitally drawn by Crash Zone to duplicate to scale of the crash scene

Conclusion

- ** Trooper is dispatched to crash.
- ** Conducts crash investigation
- ** Completes crash report
- ** Clears scene
- ** If fatal crash, Corporal is called
- ** Photos & Measurements are taken
- ** Drag Sled
- ** Interview of witnesses
- ** Photogrammetry utilized
- ** Medical Examiner notified
- ** Evidence collected and identified
- ** Scene cleared

