

SAN BERNARDINO COUNTY SHERIFF  
CSI TRAINING UNIT  
GUNSHOT TRAJECTORY RECONSTRUCTION  
OUTLINE

- I. Reconstruction
  - A. Direction of travel
    - 1. Glass
    - 2. Metal
    - 3. Other materials
  - B. Angle of impact
    - 1. Glass
    - 2. Metal
    - 3. Other materials
    - 4. Vehicles
  - C. Sequencing
    - 1. Glass
    - 2. Other materials
  - D. At the scene
    - 1. Placards
    - 2. Connecting holes
    - 3. Stringing
  - E. The victim
    - 1. Stippling
    - 2. Entry & Exit wounds
    - 3. Tracing bullet paths at autopsy
  
- II. Evidence Collection
  - A. Terminology
    - 1. Weapons – make, model, caliber
    - 2. Projectiles
    - 3. Weapon parts
  - B. Packaging
    - 1. Weapons
    - 2. Projectiles/other fired debris
    - 3. Ammunition
  - C. Collecting bullets / fragments
    - 1. Imbedded in solid surface
    - 2. Out of weapon
    - 3. Loose
    - 4... From victims
  
- III. Documentation
  - A. Photography
    - 1 Best angles
    - 2 Depth of Field
    - 3 Overall, midrange, close-up
    - 4 Victims

- B. Sketches
  - 1 Different colors for different shooters
  - 2 Showing all angles
- C. Notes
- D. Report Writing

#### IV. Exercises

- A. Direction of travel
  - 1. Student will determine direction of travel of bullet holes in wood frame wall covered with gypsum board
  - 2. Student will determine direction of bullet holes in wood frame covered with plywood
  - 3. Student will determine direction of travel of bullet holes in glass
  - 4. Student will determine entrance and exits on a variety of other objects such as material, clothing, coffee cans and plastic buckets

NOTE: All bullet holes have been previously created in objects

#### VI. Testimony

- A. Displays / models
  - 1. 3D Models
  - 2. Diagrams
- B. Know your procedures
  - 1. How did you determine trajectories
  - 2. Limit testimony to your level of expertise