

FEDERAL LAW ENFORCEMENT TRAINING CENTER



STUDENT GUIDE

CRIME SCENE SKETCH SG-205 (8-82)

DEPARTMENT OF THE TREASURY

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CRIMINALISTICS

"The Crime Scene Sketch"

I. DEFINITION.

Websters New Collegiate Dictionary defines the word sketch as "a rough drawing representing the chief features of an object or scene and often made as a preliminary study." (Emphasis added.)

II. IMPORTANCE.

It is essential that some means of an accurate representation of the crime scene be presented in court in a manner that all members, judge, jury, prosecutor, defense attorneys, witnesses and others involved, can view an accurate, objective description of the crime scene as it existed before any item was altered or removed.

Photography and sketching combined, should, as a rule, be utilized to record the crime scene. Disadvantages of photography include the cluttering of the scene and the camera's inability to "see" certain objects hidden by other objects. The most effective method of recording the placement, size or dimension of physical evidence or areas, will be the officer's Crime Scene Sketch.

III. PURPOSE OF THE SKETCH.

The purpose of a Crime Scene Sketch is manifold.

- A. Used for court presentation.
- B. Acts as a supplement to photographs.
- C. Depicts the actual measurements of the crime scene.
- D. Records the actual position of the evidence and other pertinent objects.
- E. Records the physical dimensions of the scene.
- F. Shows actual distances between objects not determined by photographs.

G. Refreshes the memory of both officer and witness.

IV. GENERAL RULES FOR SKETCHING.

In order to prevent distortion, accuracy is of vital importance. Distances should not be measured by paces and then recorded on the sketch by feet and inches. All measurements should be recorded in a systematic method and measured accurately, not by guess work or approximation. It is also very important to determine what is to be sketched.

The officer responsible for the sketch should be familiar with the scene, the surrounding area, what has been declared physical evidence, what areas should be sketched, and how much area is to be covered, both interior and exterior, to support the investigator in properly recording the crime scene. If possible, a rough sketch, completed prior to the departure of witnesses or victim, would be of significant value to the sketcher, to pin-point exact positions at the time of the incident and identify entry, or exit points of the culprit.

V. BASIC RULES FOR SKETCHING.

A. Always include the magnetic north indication on your sketch.

B. Use accurate measurements furnished to you by your measuring team and be sure they are verified.

C. Keep your sketch clear of non-essential items. This is an advantage of a sketch over a photograph. The clutter can be removed.

D. Do not rely on memory to finish your sketch or to make corrections back at headquarters or any other place removed from the crime scene location.

E. Record camera positions and include these on both sketch and photograph.

F. If necessary, record measurements on supplemental sheet, but include a Title Block for each sheet, including the sheet on which the sketch is placed.

G. Use standard accepted symbols for objects. If symbols are your own, be sure to include an explanation of symbol meanings in the Legend.

VI. TYPES OF SKETCHES.

There are various types of sketches used by police organizations. However, we are interested in three types normally used in police work for crime scene sketching.

A. The Locality Sketch - This type of sketch shows a graphic picture of the scene and its environs, to include such items as, roads leading into scene, location of the building or house, and neighboring buildings or fields. It can aid in demonstrating the route used to approach or leave the crime scene. (See Figure 1.)

B. The Grounds Sketch - This sketch can depict the layout of the entire structure, the grounds surrounding the structure, floor plans of a multi-floor or apartment style structure. (See Figure 2.)

C. The Detail Sketch - This type of sketch depicts the immediate area of the scene only, i.e., the room where the crime was committed and the room details, including items of evidence and their exact locations. It may be sketched as a flat projection without walls or ceiling, or may be drawn as a cross-projection to show walls, floors, laid out on the same plane as the floor plans. (See Figure 3.)

VII. THE ROUGH SKETCH.

This sketch refers to the officer's work drawn at the crime scene. The sketcher must keep in mind that such sketches may be introduced into court as evidence. All measurements, locations, directions and indications should be accurate, with no deletions or additions made after leaving the scene. The measurements with the data recorded on the sketch provide the basis for the completion of the finished drawing.

*done at scene
free hand
pencil
evidence*

The Rough Sketch need not be drawn to scale, but consideration should be given toward maintaining general proportions and positions consistent with the real scene. The task of the draftsman who will be responsible for the preparation of the finished drawing will be much less confusing. (See Figure 4.)

VIII. THE FINISHED DRAWING.

The purpose of the finished drawing is to help provide the court with a clear, concise picture of the crime

LOCALITY SKETCH

CASE 22279
580 ROBERTS ROAD
GLYNCO, GEORGIA
2/22/79 - 14:20 HRS
VICTIM: JOHN G. PUBLIC
SKETCHER: SGT. TOM JONES
ASSISTANT: ROB ROYAL
BILL GRAVES.

3A

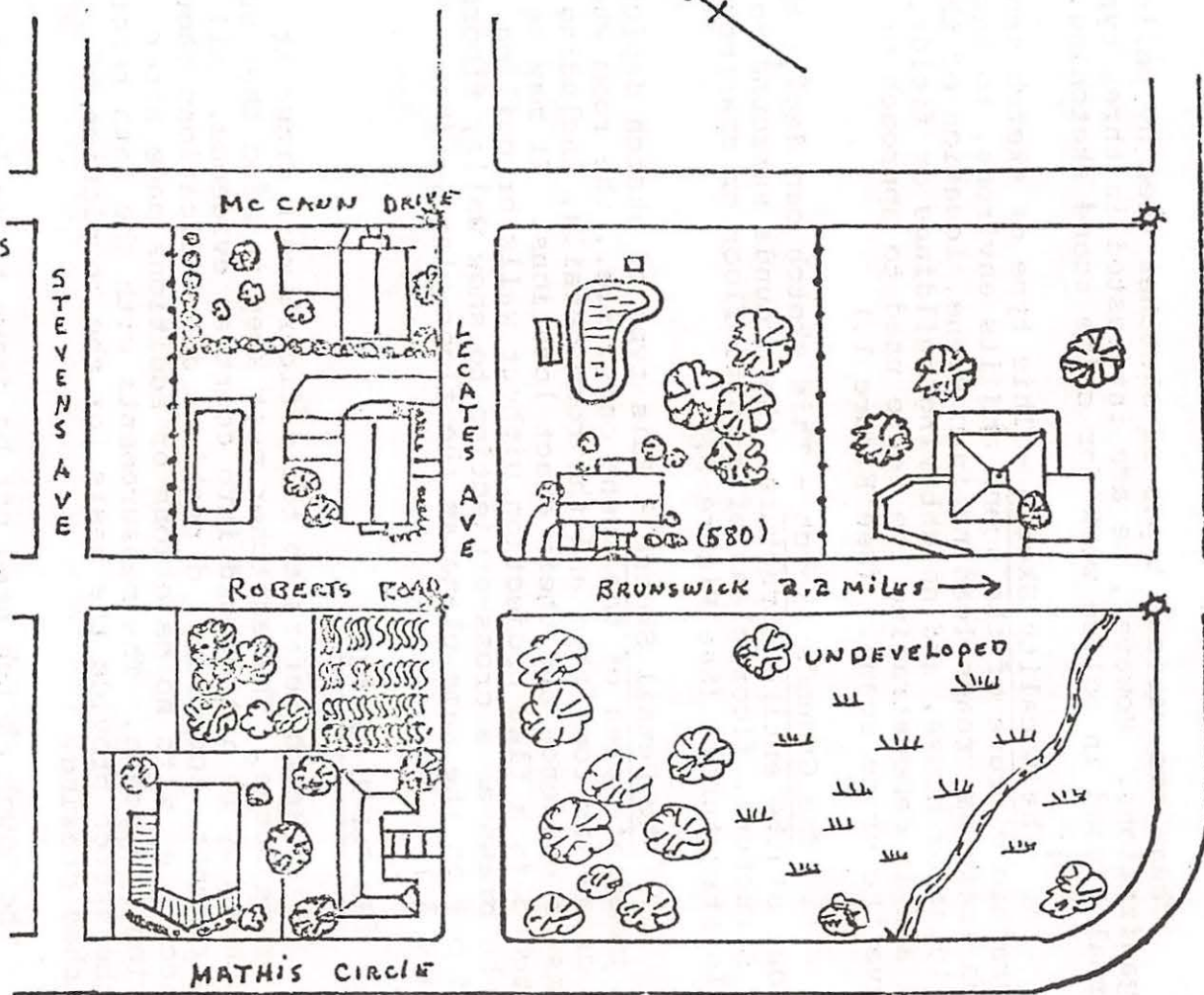
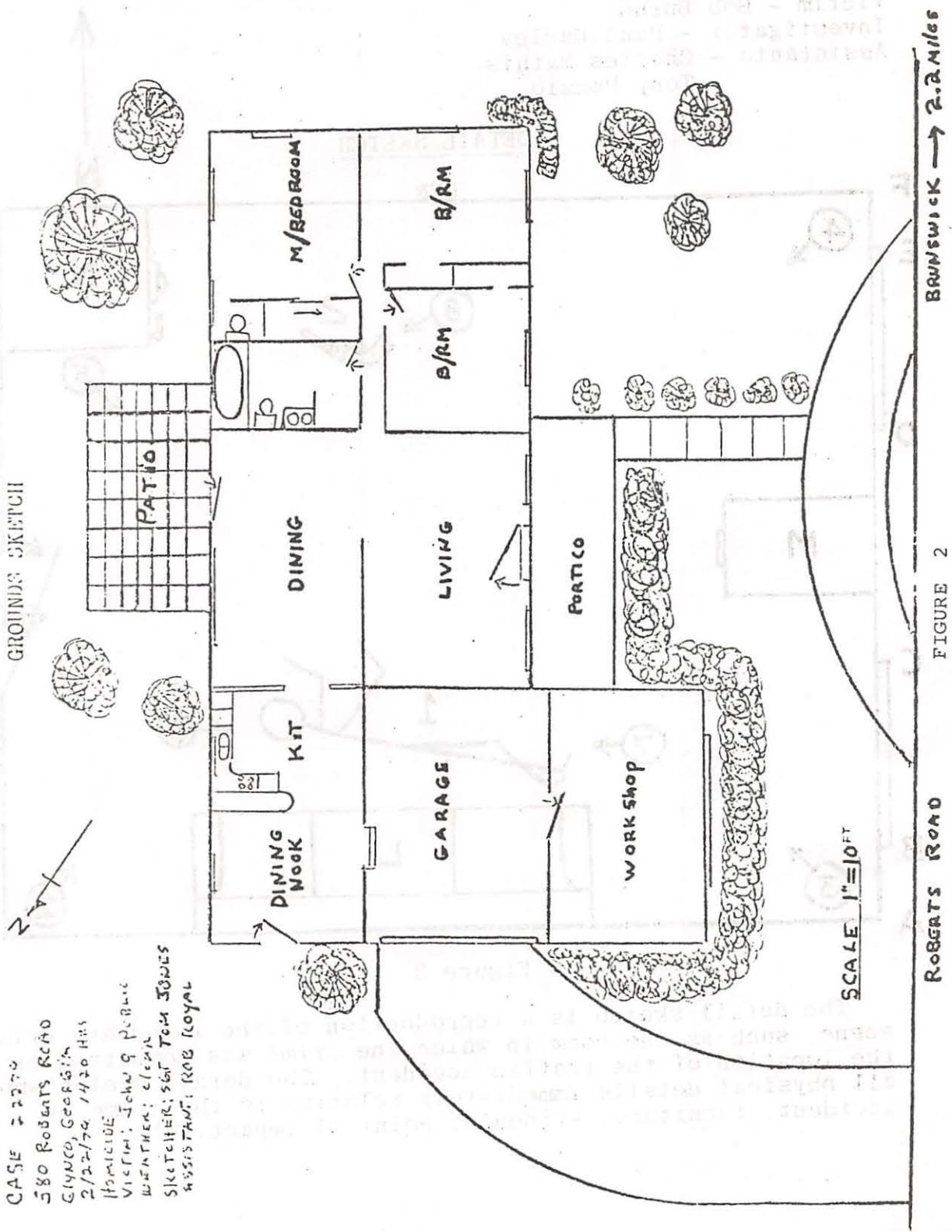


FIGURE 1

CASE 2270
 580 ROBERTS ROAD
 GUNCO, GEORGIA
 2/22/79, 1420 HRS
 HOMICIDE
 VICTIM: JOHN G PERDUE
 WENTHER: CLEVA
 SKETCHER: SGT TOM JONES
 ASSISTANT: ROE ROYAL



BRUNSWICK → 2.2 Miles

FIGURE 2

ROBERTS ROAD

Case #9PT-203
518A "E" Street
Glynco, GA 31524
7/30/82 - 1430 hours
Homicide
Victim - Bob Burns
Investigator - Paul Harley
Assistants - Charles Mathis
Tony Pazzio

DETAIL SKETCH

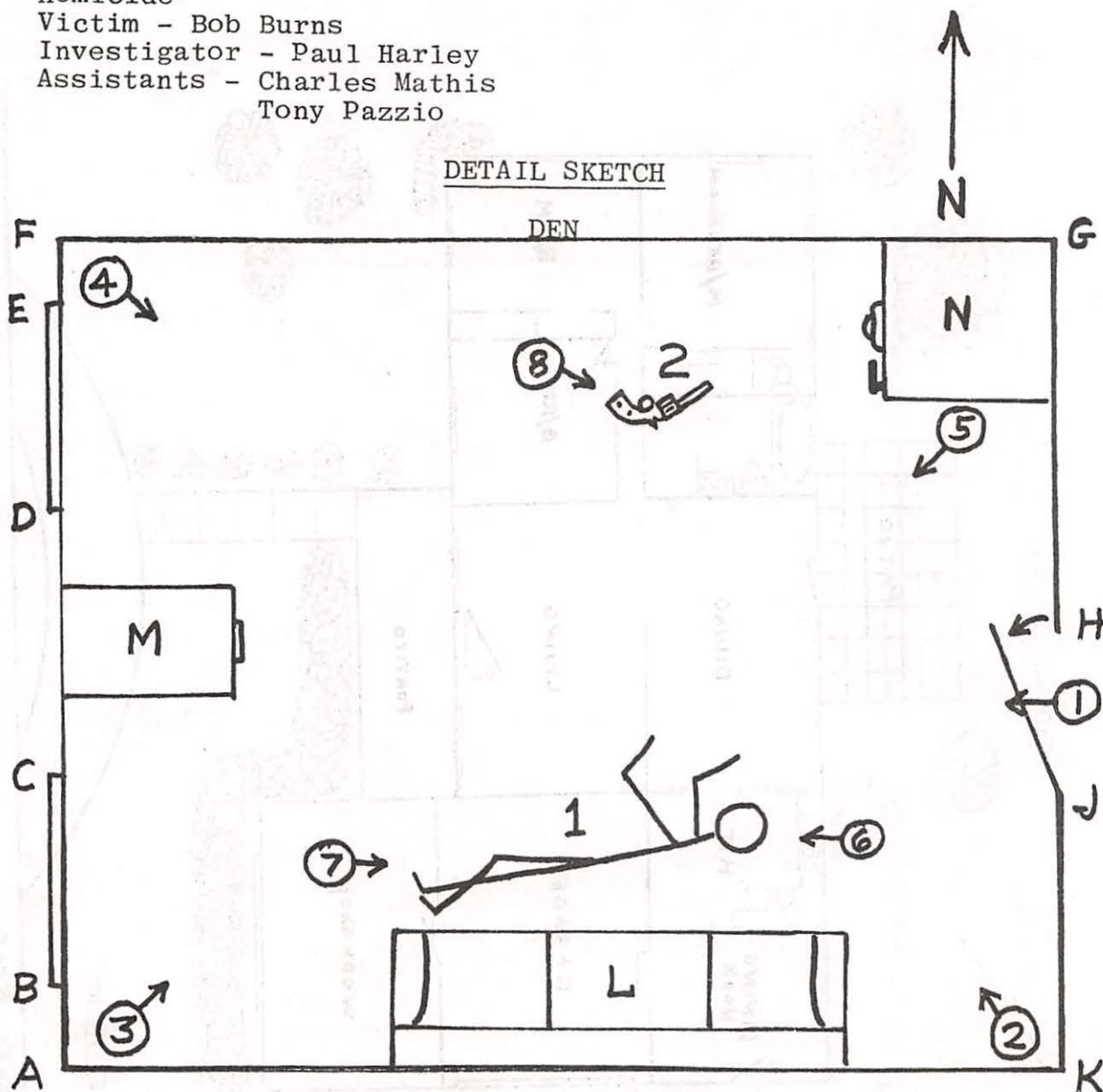


Figure 3

The detail sketch is a reproduction of the immediate crime scene, such as the room in which the crime was committed or the location of the traffic accident. The detail sketch shows all physical details immediately relating to the crime or accident, furniture, evidence, point of impact, etc.

ROUGH SKETCH

CASE # 9PT 203
 518 A "E" STREET
 GLYNCO, GA. 31524
 7/30/82 1430 HRS.
 HOMICIDE
 VICTIM: BOB BURNS
 INVESTIGATOR: PAUL JONES
 ASSISTANT: MARY SMITH

EVIDENCE

- 1 - VICTIM
- 2 - REVOLVER

← ○ CAMERA POSITIONS

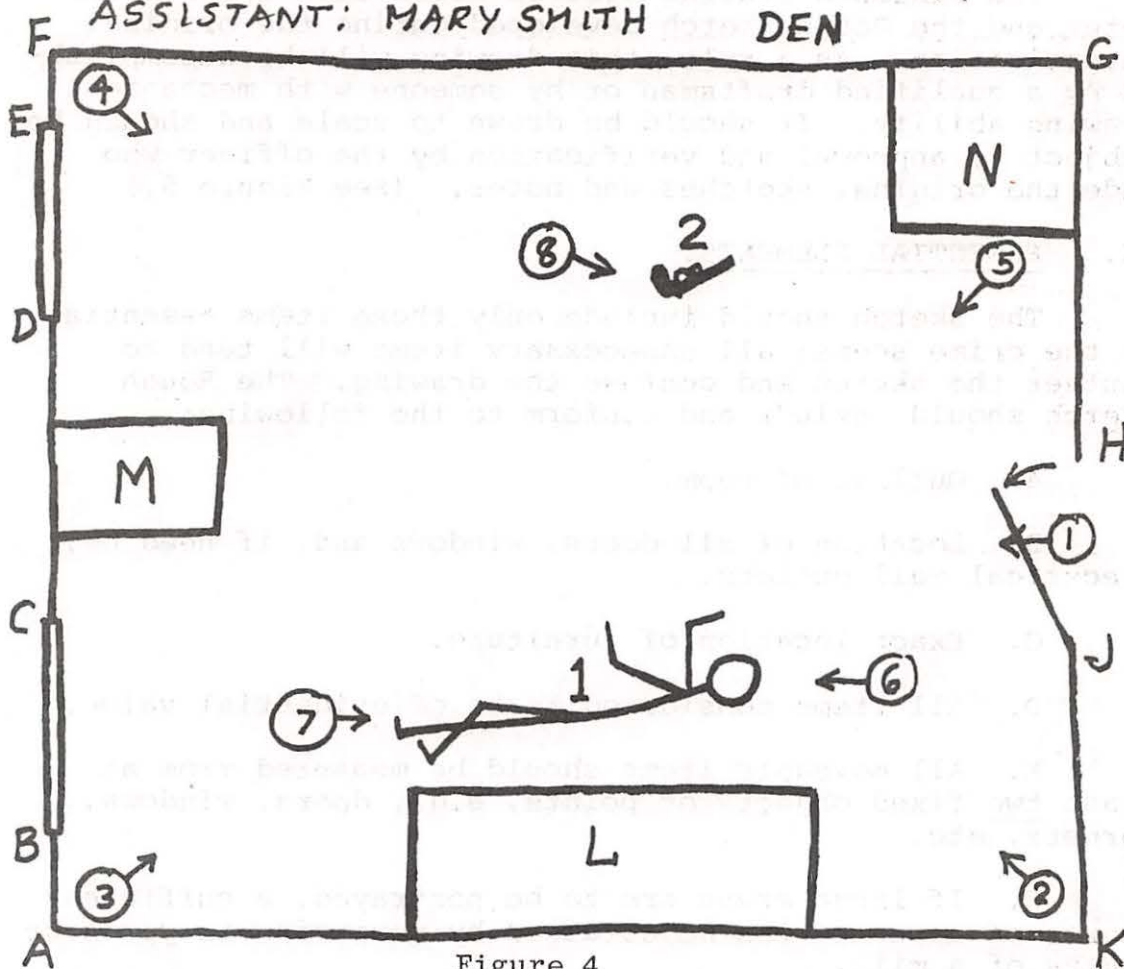


Figure 4

MEASUREMENTS

- A-B - 1'6"
- B-C - 2'6"
- C-D - 5'
- D-E - 2'6"
- E-F - 1'6"
- F-G - 16'
- G-H - 5'
- H-J - 3'
- J-K - 5'
- K-A - 16'

FIXTURES

- L - COUCH, 6' X 3' X 3'
- WALL AB - L - 5'
- WALL KJ - L - 5'
- M - FILE CABINET,
2'6" X 2'6" X 5'
- WALL AK - M - 5'6"
- WALL FE - M - 5'
- N - SAFE, MARX MOD. 10
3' X 3' X 3' 8"

EVIDENCE

- K-1 - 5'1" (HEAD)
- J-1 - 4' (HEAD)
- A-1 - 4'8" (RIGHT FOOT)
- C-1 - 4'11" (RIGHT FOOT)
- D-2 - 7'6" (GUN BUTT)
- F-2 - 7'5" (GUN BUTT)
- G-2 - 5'1" (GUN BARREL)
- H-2 - 5'9" (GUN BARREL)

scene. With such a graphic presentation, judge, jury and attorneys may be able to perceive the arrangement and the exact locations of significant elements of the crime scene.

At the same time, the drawing serves to refresh the officer's memory. Bear in mind that considerable time may have passed between the original investigation and the courtroom presentation.

The Finished Drawing will be based upon information, notes, and the Rough Sketch developed during the original investigation. As a rule, this drawing will be accomplished by a qualified draftsman or by someone with mechanical drawing ability. It should be drawn to scale and should be subject to approval and verification by the officer who made the original sketches and notes. (See Figure 5.)

IX. ESSENTIAL ELEMENTS.

The sketch should include only those items essential to the crime scene; all unnecessary items will tend to clutter the sketch and confuse the drawing. The Rough Sketch should include and conform to the following:

- A. Outline of room.
- B. Location of all doors, windows and, if need be, electrical wall outlets.
- C. Exact location of furniture.
- D. All items considered to be of evidential value.
- E. All moveable items should be measured from at least two fixed objects or points, e.g., doors, windows, corners, etc.
- F. If large areas are to be portrayed, a sufficient degree of accuracy can be obtained by measuring in yards or tenths of a mile.
- G. If small areas are involved, it might become necessary to measure as precisely as one sixteenth of an inch.
- H. Caution must be observed to insure the Finished Drawing and the Rough Sketch are consistent with each other with no discrepancies between them.

Case #9PT-203
518A "E" Street
Glynco, GA 31524
7/30/82 - 1430 hours
Homicide
Victim - Tom Jones

FINISHED DRAWING

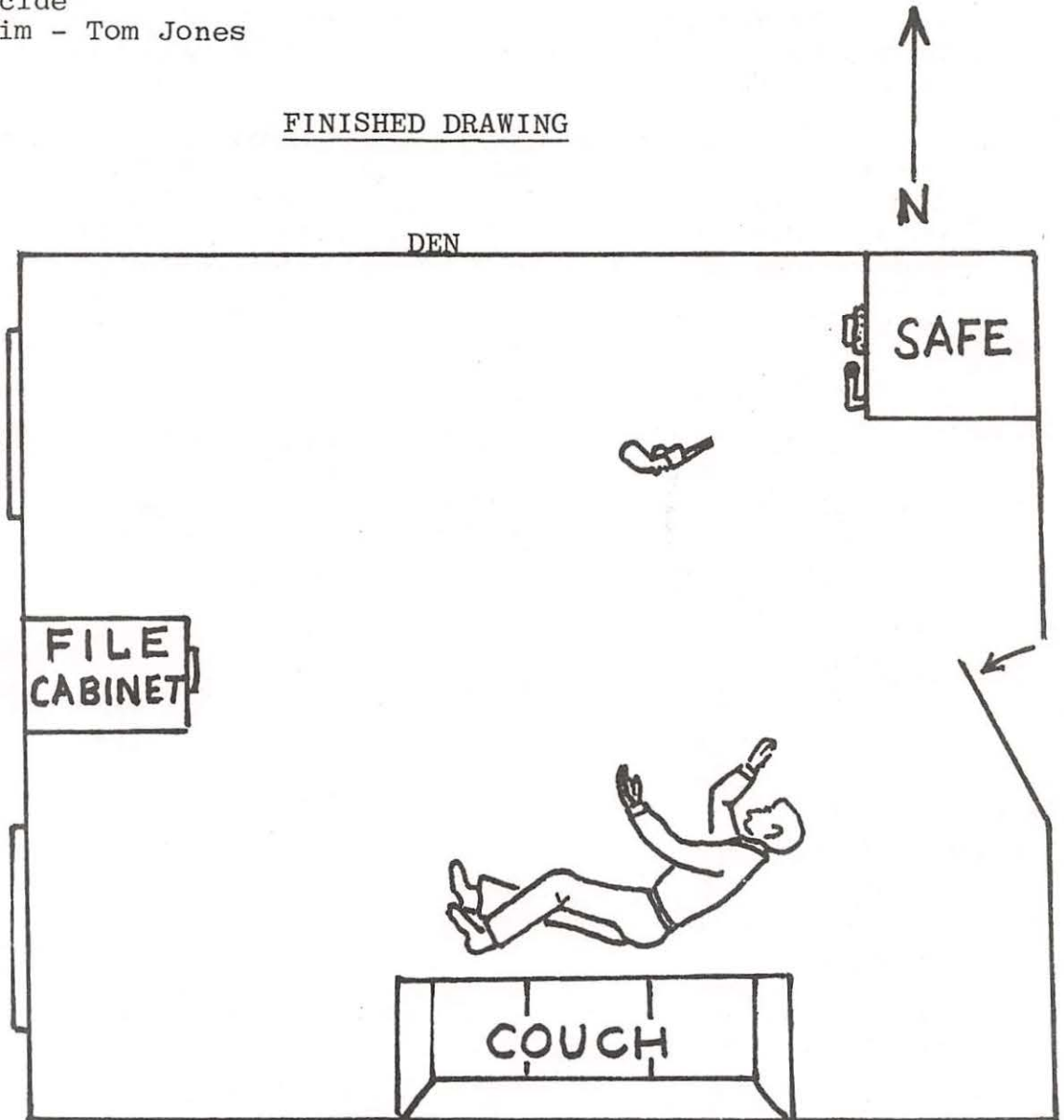


Figure 5

Investigator - Sgt. Paul Harley
Sketcher - Charles Mathis
Measurers - Hugh Crews
Tommy Pazzio

I. The use of magnetic compass indication symbols should be employed to properly orient the sketch.

J. The Rough Sketch is not normally drawn to scale. However, the relative proportions of the sketch should be consistent with those of the room. Thus, if the room measures 15 feet by 30 feet, the room sketch should be approximately twice as long in one dimension as it is in the other.

K. The use of stick figures should be used if templates are not available.

X. TITLE BLOCK.

Each Rough Sketch must be authenticated. This requires a Title Block to record information pertinent to the crime scene.

Title Block Information

A. Case number.

B. Location/address.

C. Location within building.

D. Date/time of sketch.

E. Offense.

F. Victim or scene portrayed.

G. Name of sketcher.

H. Name(s) of officer(s) measuring area.

XI. LEGEND.

The Legend provides a means to reduce the amount of special skill or artistic skill needed to produce a simple, but accurate sketch. In large scale outdoor scenes, conventional mapping signs or symbols may be used to depict landscape features. It is not always necessary to draw an item in its own form. A symbol, number or letter may be assigned and then identified in the legend.

↓
a) point along wall
b) furniture

Where areas contain numerous items of fixtures, furniture, etc., the lettering can be extended by adding to the basic letter A, e.g., AA, AB, AC, etc. Numbers for items of evidence may continue indefinitely.

Because of the dimensions and the complexity of the scene, a second sheet may be required for the Legend and measurement record of the sketch. The second sheet must be identified with the same information Title Block as recorded on the sketch portion. (See Figure 6.)

XII. CRIME SCENE SKETCH KIT.

There are commercial outlets that sell complete kits for sketching. It is possible, however, for a small organization to purchase the required materials from a local source, thus saving at least half the cost.

Minimum materials needed are:

- A. Pencils, soft lead and eraser.
- B. Plain bond paper 8 1/2" X 10 1/2".
- C. Ruler, wood or metal, 12".
- D. 50 Foot metal tape measure.
- E. Compass, magnetic.
- F. Small briefcase for transport.

If it is available, the use of graph paper will aid greatly by providing a graphic scale to the sketch.

XIII. PREPARING TO SKETCH.

Begin the sketch by recording the dimensions of the room or area in question. Lay out a base plan of the walls, doors, windows, and be sure to locate all fixed objects to be used later as reference points. Once the basic plan has been recorded, start putting in the moveable objects that have been selected as being of significance.

The final sketching should consist of those items to be recorded as essential items of evidence. Be sure that you remember to record the camera positions and, if other than a standard symbol is used, to explain it in the Legend.

LEGEND

(Title Block)

Case #9PT-203
518A "E" Street
Glynco, GA 31524
7/30/82 - 1430 hours
Homicide
Victim: Bob Burns
Investigator: Paul Jones
Assistant: Mary Smith

The legend may be included on the rough sketch. If a separate sheet is used to record measurements, etc., be sure to include a title block.

Measurements

A-B - 1'6"
B-C - 2'6"
C-D - 5'
D-E - 2'6"
E-F - 1'6"
F-G - 16'
G-H - 5'
H-J - 3'
J-K - 5'
K-A - 16'

Fixtures

L - Couch, 6' x 3' x 3'
Wall AB-L - 5'
Wall KJ-L - 5'
M - File Cabinet
2'6" x 2'6" x 5'
Wall AK-M - 5'6"
Wall FG-M - 5'
N - Safe, Marx Mod. 10
3' x 3' x 3'8"

Evidence

1 - Victim
2 - Revolver
SW, 4" barrel
SN 1205
.38 caliber
Model 51
Chrome plated

Evidence

K-1 - 5'1" (Head)
J-1 - 4' (Head)
A-1 - 4'8" (Right Foot)
C-1 - 4'11" (Right Foot)
D-2 - 7'6" (Gun Butt)
F-2 - 7'5" (Gun Butt)
G-2 - 5'1" (Gun Barrel)
H-2 - 5'9" (Gun Barrel)



Camera Positions

Figure 6

XIV. CRIME SCENE NOTES.

A sketch is a graphic representation of the crime scene, but there are many facts that will not be shown, e.g., color of walls, floors, rugs, unusual items of furniture, fixtures, figurines, paintings and other sundry objects. A good investigator/sketcher will note these facts in his police notebook for further reference for possible linking the suspect to the crime. Photographs will also contribute to the recording of many details.

XV. METHODS OF SKETCHING.

There are various methods for locating items within the crime scene area. The three methods we will cover are:

- A. Straight Line Method (See Figure 7).
- B. Rectangulation Method (See Figure 8).
- C. Triangulation Method (See Figure 9).

The two methods most generally used are the rectangulation and triangulation methods. Both methods can be employed in field and accident sketching.

There is an additional type of sketch known as the Cross Projection Sketch. This type of sketch is used when items of evidence such as bullets, blood or other items have entered or are upon the walls or ceiling and it becomes necessary to portray them in their proper location. When items are located in walls, etc., flat projection will not do the job. By the use of cross projection the walls are folded down, as well as the ceiling and are shown on the same plan as the floor. It will now be possible to show the location as well as the measurements from permanent points. (See Figure 10.)

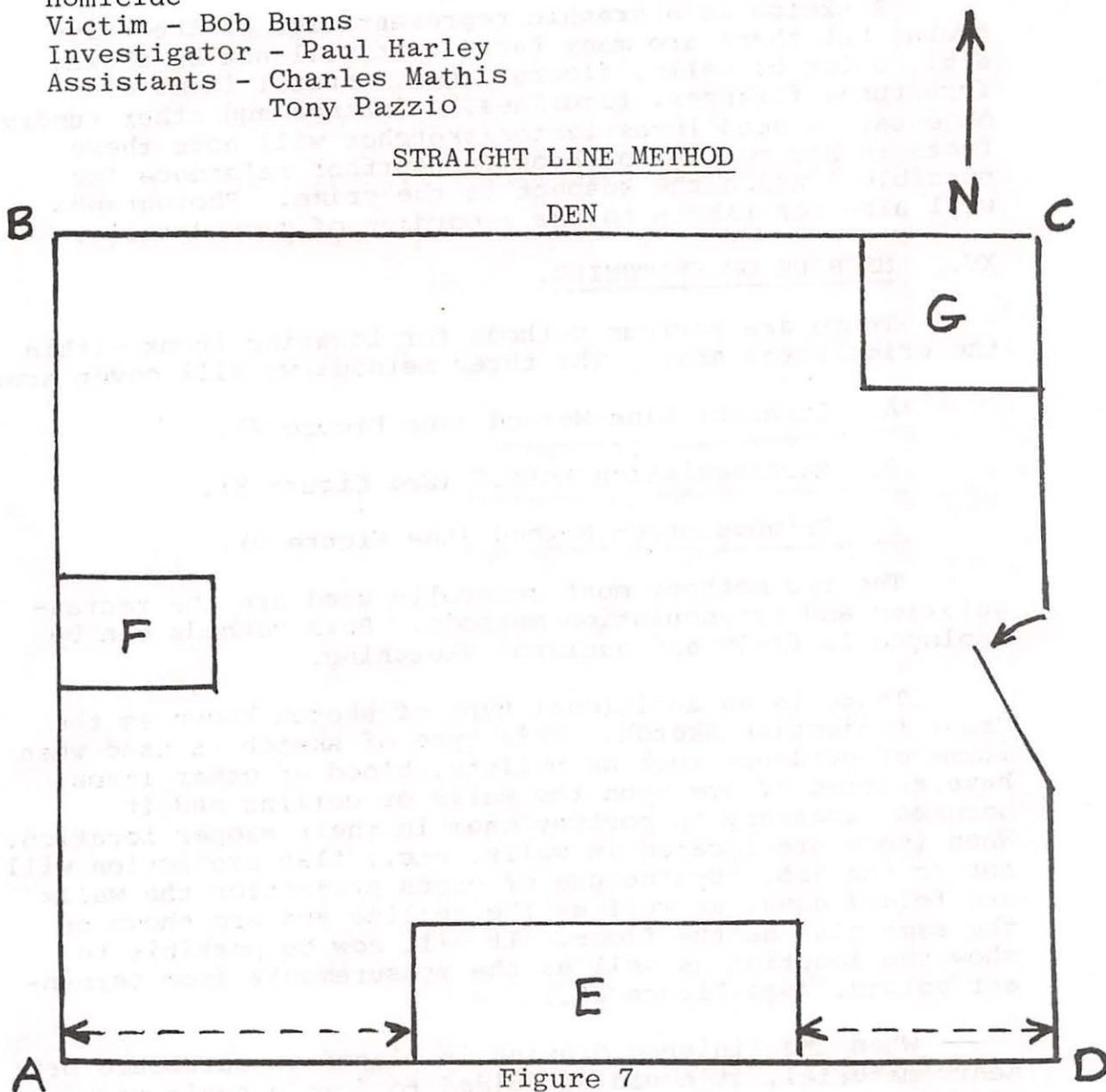
When the finished drawing is placed on cardboard or heavy material, it could be folded to form a scale model of the crime scene.

XVI. ELONGATED FORMS.

When the sketcher wishes to establish the location of any elongated form such as a kitchen knife or a human body, it is necessary to establish the positions of at least two

Case #9PT-203
518A "E" Street
Glynco, GA 31524
7/30/82 - 1430 hours
Homicide
Victim - Bob Burns
Investigator - Paul Harley
Assistants - Charles Mathis
Tony Pazzio

STRAIGHT LINE METHOD



Straight line measurements are normally made of furniture or evidence which may be located on the wall.
Two measurements are taken, one from each side of the object.

Example: Couch, 6' x 3' on wall
CD - E = 5'3", AB - E = 6'9"

Case #9PT-203
518A "E" Street
Glynco, GA 31524
7/30/82 - 1430 hours
Homicide
Victim - Bob Burns
Investigator - Paul Harley
Assistants - Charles Mathis
Tony Pazzio

RECTANGULAR SKETCH METHOD

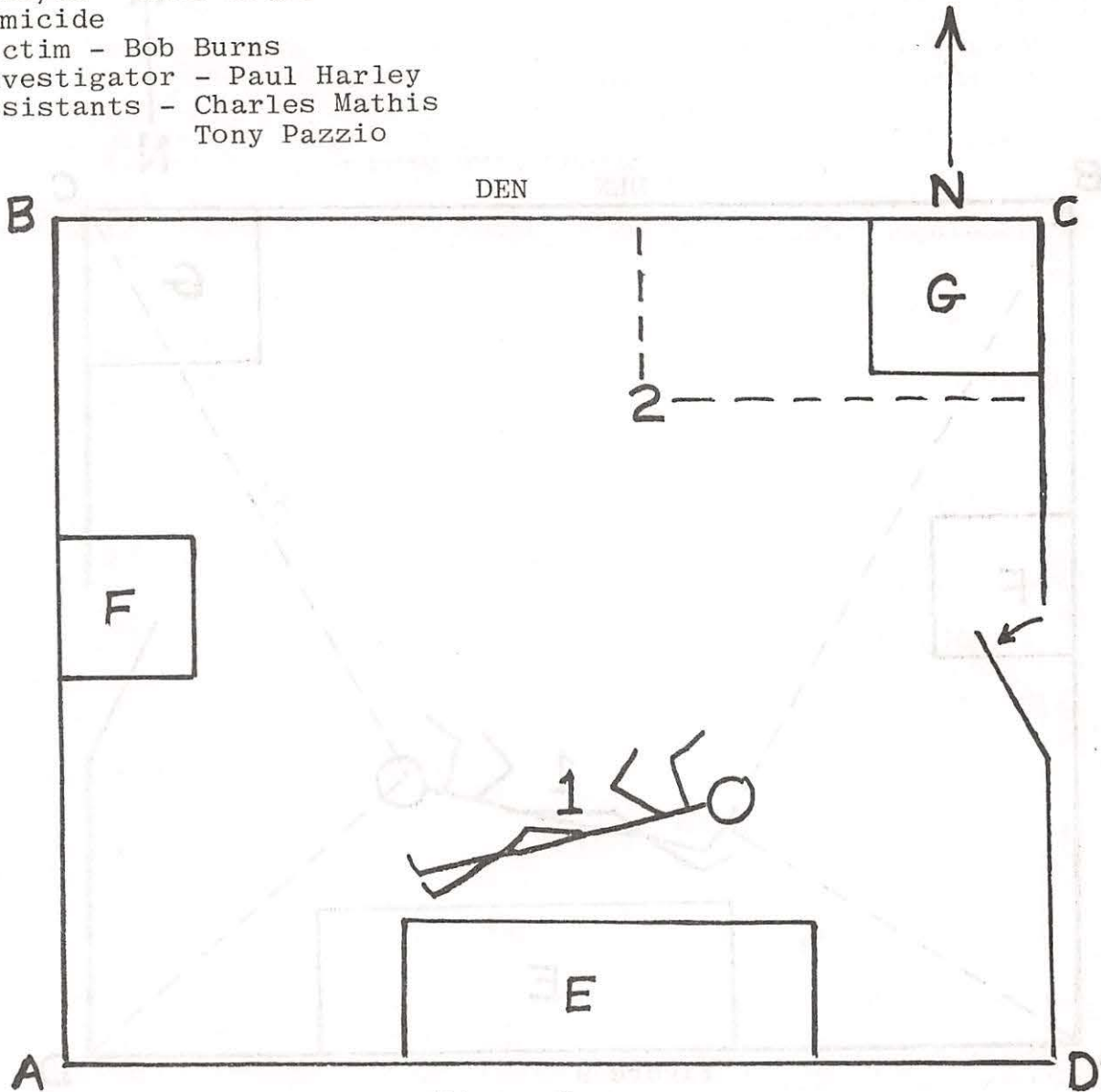


Figure 8

The rectangular coordinate method uses the principle of measuring the distance of an object from two fixed points. Two measurements are made at right angles from nearby adjacent walls or other fixed points to the evidential object. All measurements are recorded in the crime scene sketch legend.

Example: BC-2 = 3'
CD-2 = 5'3"

TRIANGULATION SKETCHING METHOD

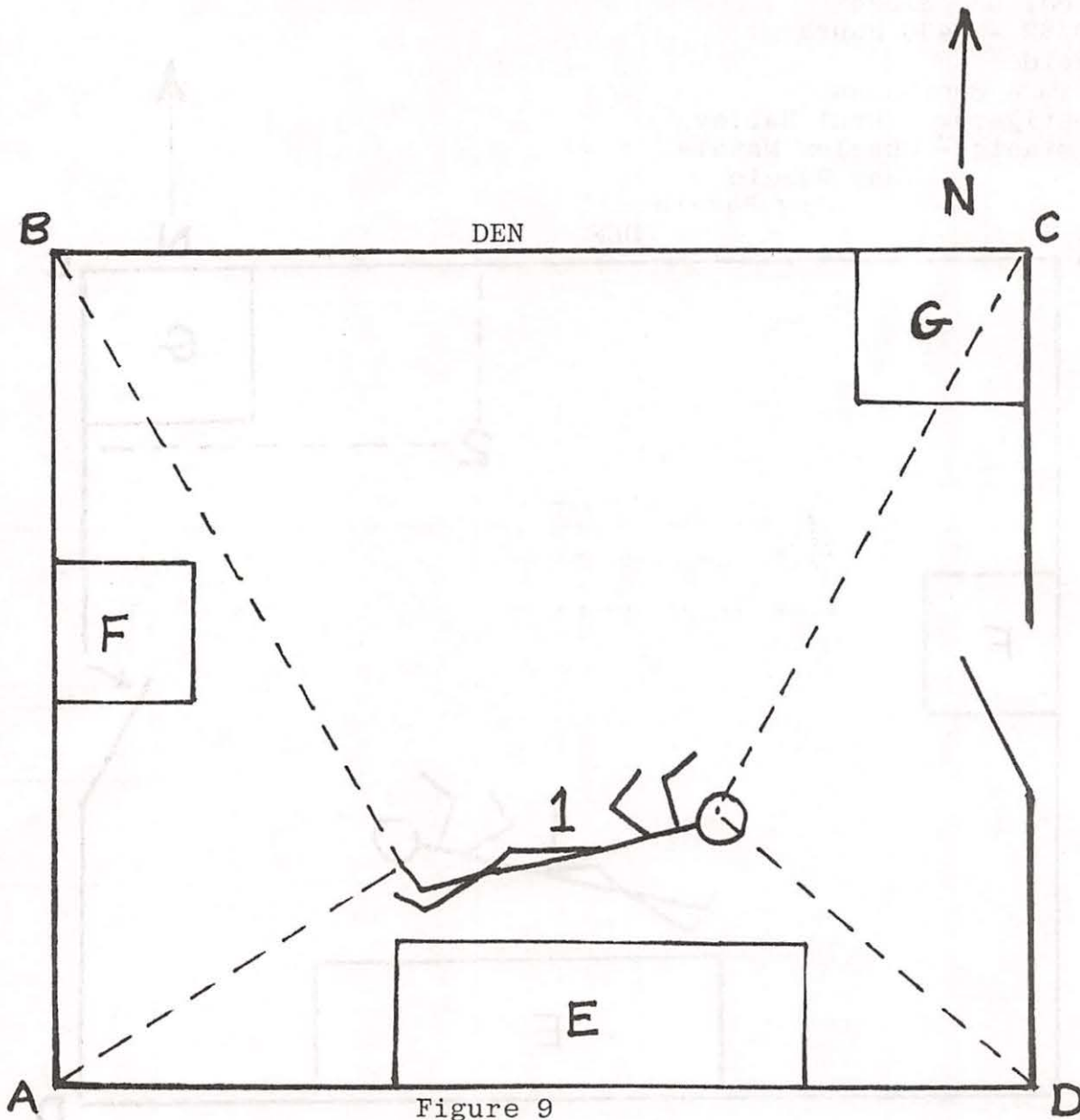
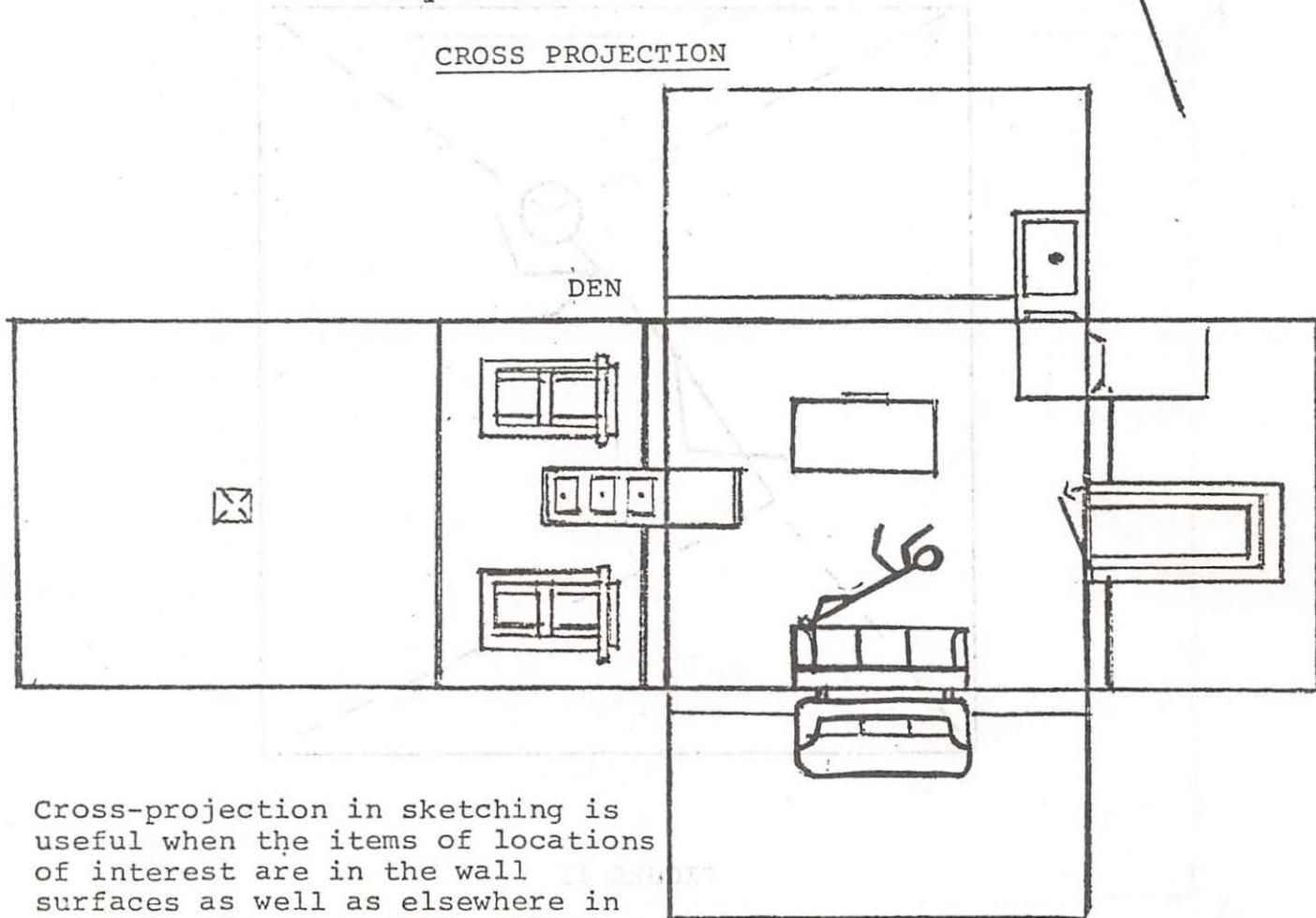


Figure 9

Triangulation method may be used to determine distances either indoors or outdoors. Two fixed points (corner of room, door frame, tree, fence post, utility pole, etc.) are selected as points of reference. Measurements are taken from the object to each point of reference, forming a triangle. The point of intersection of the two lines is the exact location of the object.

Example: D-1 = 3'4" (Head)
C-1 = 9'1" (Head)

Case #PTD #2
518A "E" Street
Glynco, GA 31524
1/28/81 - 1430 hours
Homicide
Victim - Bob Burns
Investigator - Paul Harley
Assistants - Charles Mathis
Tony Pazzio



Cross-projection in sketching is useful when the items of locations of interest are in the wall surfaces as well as elsewhere in an enclosed space. The walls, windows, and doors in this type of sketch are drawn as though the walls had been folded flat on the floor.

Figure 10

separate points on the object. For example, the point and butt end of a knife or the right ear and left toe of a cadaver would be satisfactory. (See Figure 11.)

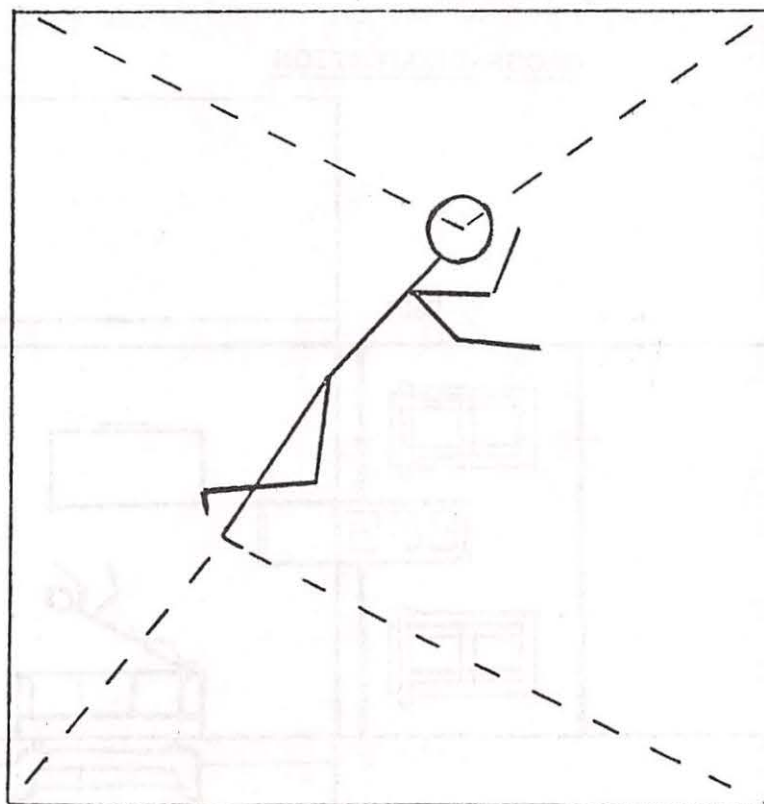


FIGURE 11

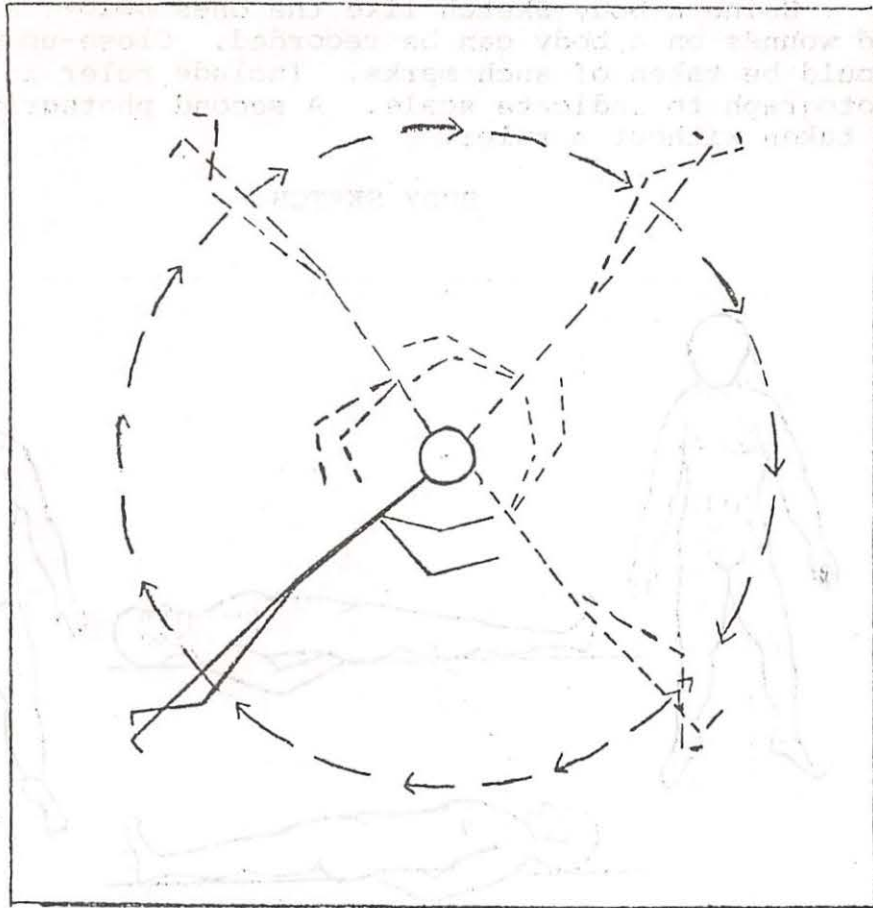
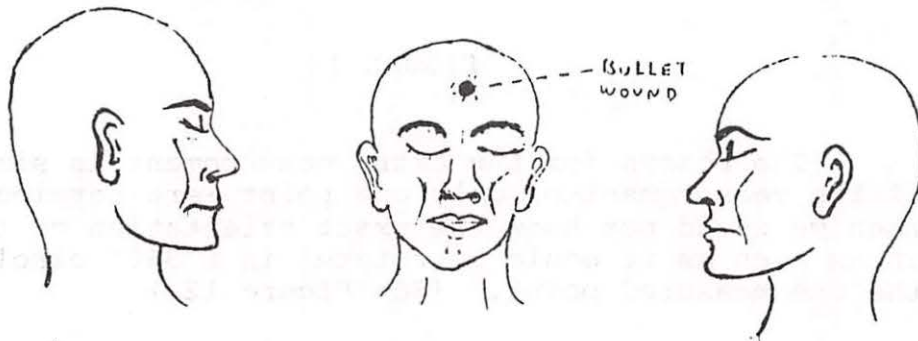
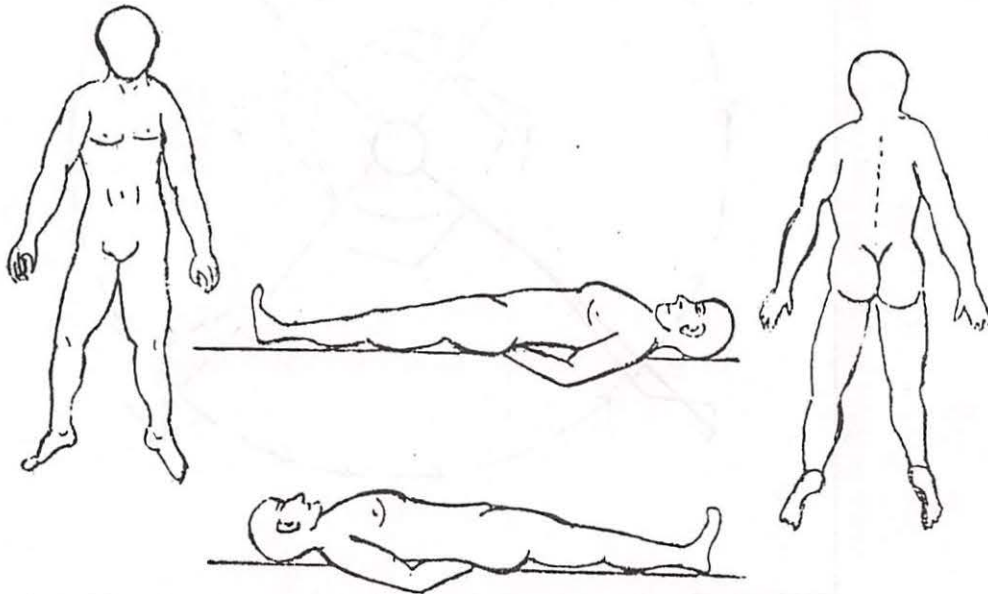


FIGURE 12













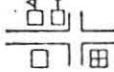




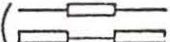



















The reason for the extra measurement is simply that if the measurement of only one point were carried out, then we would not know the exact orientation of the object, in as much as it could be rotated in a 360° circle around the one measured point. (See Figure 12.)

Using a Body Sketch like the ones below, all marks and wounds on a body can be recorded. Close-up photographs should be taken of such marks. Include ruler in one photograph to indicate scale. A second photograph should be taken without a ruler.

BODY SKETCH



SKETCHING SYMBOLS

ROAD		STREET LIGHT		MAN	
FOOT PATH		POLE (TELEPHONE or POWER)		HOUSE	
BRIDGE		TELEPHONE or POWER LINE		CHURCH	
CULVERT		FENCE		SCHOOL	
ROAD and BUILDINGS		RAILROAD		HOSPITAL	
CAR		STREAMS		WINDOW	
PATH of CAR		TREE		DOOR	
SKID MARKS		HEDGE		CHAIR (STRAIGHT BACK)	
PATH of PEDESTRIAN		POND		CHAIR (OVERSTUFFED)	
POINT of IMPACT		MARSH		FURNITURE	
TRAFFIC SIGNAL		CULTIVATED LAND		STAIRWAY	
TRAFFIC SIGN		NORTH ARROW		ELEVATOR SHAFT	
CAMERA POSITION					
EVIDENCE SYMBOL	