
TECHNICAL INFORMATION

Sketches and Detailed Drawings of the Crime Scene

TB100

The purpose of this manual is to discuss the importance of crime scene sketches as opposed to crime scene photographs. A finished sketch gives a precise and permanent record of the facts found at the scene. Photographs, on the other hand, are ordinarily two-dimensional views that don't provide accurate information concerning distances between objects present at the scene and cannot be clearly understood unless measured distances between these points are known. A finished drawing or rough sketch of the scene is the simplest and most effective way of showing actual measurements and of identifying important items of evidence at the location of the scene.



ROUGH SKETCH

The rough sketch is prepared by the investigator at the scene—but not until all photography has been completed and before any evidence has been collected. The rough sketch does not have to be drawn to scale, but should include exact measurements of the surroundings and the location of evidence in relation to the victim's location, or other important evidence.



Necessary Materials for a Rough Sketch

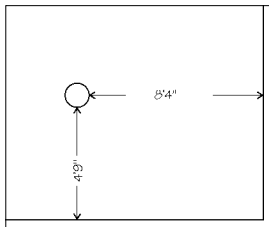
The only materials necessary for the rough sketch are a lead pencil, a straightedge, and a pad of paper. Graph paper is recommended since it will provide a scale and a guide for the line to be drawn. A magnetic compass is also a useful device in establishing a permanent directional reference. *NOTE: The most convenient scale for sketches produced on 8.5" x 11" paper is 1/4" = 1 ft. as this is the scale used on drawing templates.*

Measurements for a Rough Sketch

All measurements recorded at the scene must be accurate. If the scene is a large area, a sufficient degree of accuracy may be obtained by the use of yards or tenths of a mile, whereas, it may be necessary to measure smaller areas to within one sixteenth of an inch. It is always preferable to work with an assistant when possible and have them verify all measurements before they are recorded. *Note: Measurements of the location of moveable objects should refer to at least two fixed objects such as doors and windows. In doing so, the moveable objects can be relocated in their original position at a later time.*

Two methods are generally employed for locating objects within an area. First is the coordinate method: distances are shown by two mutually perpendicular lines. If the scene is a room, the objects of interest are mapped with lines drawn to the nearest wall as shown in the illustration to the right.

The second method of measurement is triangulation which is most often applied to scenes within large buildings such as a warehouse or factory as

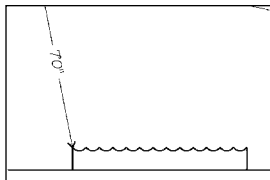


COORDINATE METHOD

well as to outdoor scenes. To triangulate, select two fixed objects such as structural supports, doorways, windows, stairways, trees or nearby buildings. In an outdoor scene, utility poles and/or traffic signs should be used as a last resort for reference points as they are frequently targets of motorists.

Development and Use of a Legend

To reduce the amount of artistic skill and produce a simple rough sketch, a system of symbols should be employed to identify various objects. These symbols are then defined in the legend. In sketches of relatively large areas, conventional signs and symbols may be used. If it is necessary to depict considerable detail within a small area, these various objects may be indicated with letters and/or numbers and keyed to the legend.



TRIANGULATION METHOD

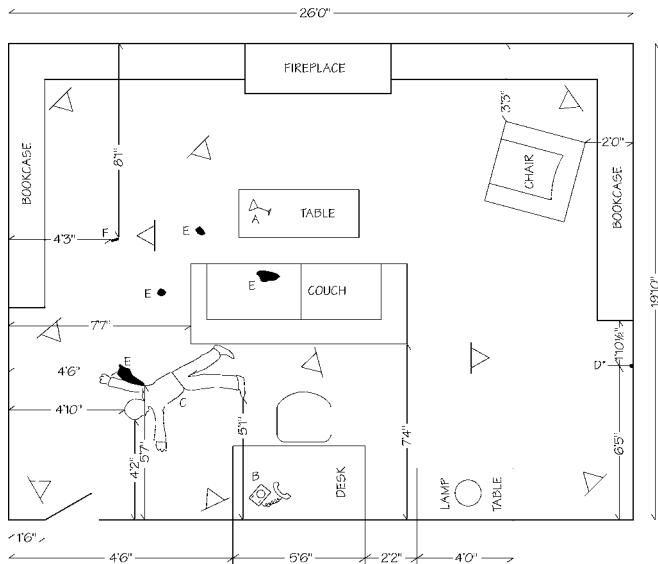
Preparing the Rough Sketch

The best starting point for filling in the details of the crime scene is an entrance-way. Begin the sketch from the investigator's left and fill in the details in a clockwise fashion. Place all windows and doors, then plot the positions of furniture. The final task is to record the location of all physical evidence and assign each piece a letter or number that is keyed to the legend. If anything has been moved by the investigators, victims, or witnesses, ensure the items are returned to their original position before placing them on the sketch.

1. Record the dimensions of the room or area in questions.
2. Locate all fixed objects such as doors, windows, light fixtures, shelves, etc.
3. Finally, locate all moveable objects starting with furniture and ending with items to be used as evidence.

With the completion of the rough sketch, the investigator is now free to collect and secure the evidence. Never add or delete anything on the sketch after leaving the scene and place only important items on it—never trust your recollection. When this task is complete, the next step is to return to headquarters and prepare the finished sketch as shown to the left.

Finished Sketch



Case 10-789-96
 301 N. Centre St.
 Oct. 6, 1996; 11:40 pm
 Homicide
 Victim: Lester W. Brown
 Investigator:
 Sgt. L.A. Duffy
 Ass't By:
 Ptlm. R.W. Hicks

LEGEND:

- A. Cocktail Glass
- B. Telephone
- C. Victim
- D. Bullet Hole
- E. Blood Stains
- F. Shell Casing
- △ Camera Locations
- D* = 3 ft. 4.75 inches
from the floor



SCALE: 1/8" = 1 foot

will serve to refresh the investigator's memory as well as to preserve the scene so that if it became necessary, the scene could be reconstructed perfectly.

Necessary Materials for a Finished Sketch

Few police agencies have a draftsman at their disposal. Therefore, the investigator usually has to complete the finished sketched. The basic tools required are a transparent ruler, pencils, paper, triangles (30, 60 and 45 degree), architect's template and building interior template.

Requirement of Additional Sketches

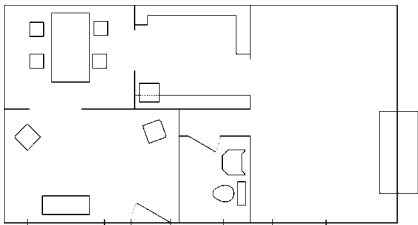
Sketches of the scene depict the area in which the crime occurred. It is often beneficial to prepare additional sketches showing the entire building and even the exterior (shown to the left). These additional sketches are useful in showing the probable course of the perpetrator through the building and may also indicate the point of entry and/or exit. These sketches should also be drawn to scale, but it is not necessary to show detail.

Surveying Methods

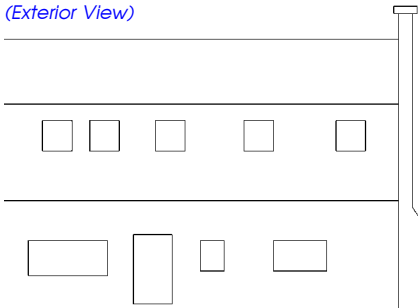
In order to portray large exterior areas accurately, some basic surveying methods may be required. Should the investigator lack the necessary training and equipment, the assistance of a surveyor employed by the city or state may be required. However, it is only on the rar-

Additional Sketches

(Interior View)



(Exterior View)



est of occasions that such measures need to be taken since the triangulation method discussed earlier will generally produce satisfactory results.

Duplication of Sketches

Since the finished sketch will be handled by a number of people, such as other investigators, lawyers, witnesses and the like, copies should be made and the original preserved by covering it in clear plastic. When making duplicates with a copier, caution should be taken as certain copier machines produce slightly reduced or enlarged copies. Therefore, it is important to include the scale employed on the original.

Another method of duplication is photographic copying such as with a digital or film camera in order to produce prints or slides. The benefit of using a slide is that the sketch can be projected on a screen in the courtroom.

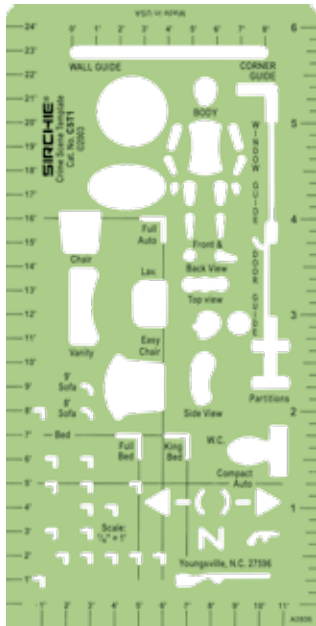
Entitling Crime Scene Sketches

Each crime scene sketch must be identified in such a way as to preclude confusion and misrepresentation. Establish a format and use it consistently on all sketches. The title should include the case identification number, location of the incident, type of offense, date, time, and the name of the investigator and the assistants at the scene.

All of this data serves to authenticate the sketch and further establishes the credibility of the investigator. The crime scene sketch is just as important as the evidence collected at the scene. After all, without it, much of the evidence will have little relevancy if it cannot be pinpointed to a particular position within the crime scene.

Inclusion of Field Notes

The finished sketch offers an accurate illustration of the crime scene, but it is merely a black and white representation of the scene. For this reason, the investigator needs to make notations of such details as the color of the walls and furniture, paintings and photographs in the room, as well as unusual items such as statuettes, antiques and the like. These items were noted by the perpetrator of the crime, and should the situation arise where a suspect confesses, these details will be essential in linking them to crime in question.



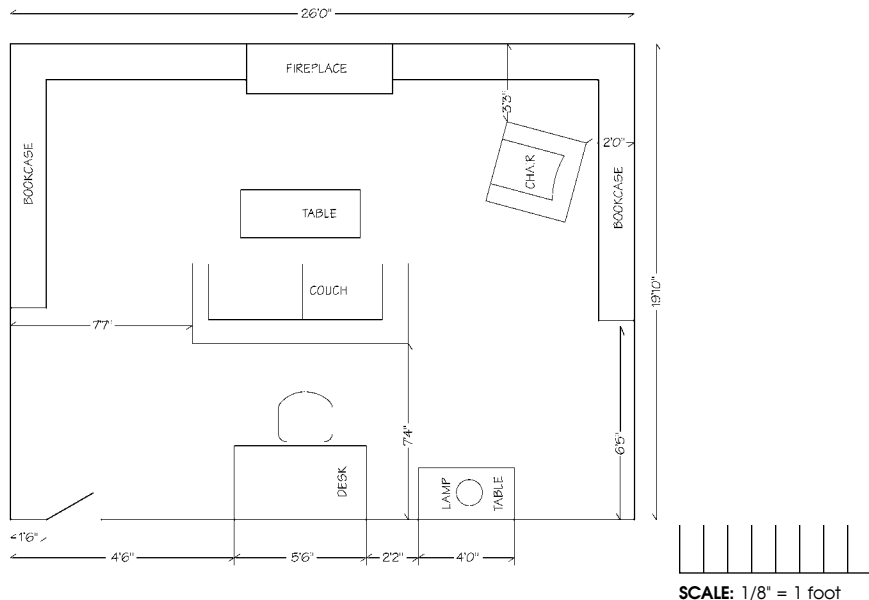
No. CST1 (50% actual size)

SCALED DRAWING

A scaled drawing is used primarily for courtroom presentation. It may be drawn to any scale chosen. The drawing should include all measurements of the rooms, furniture, walls, etc., but not the location of the evidence that has been recovered. When the drawing has been completed, a clear plastic overlay should be attached showing the location of the evidence in the room where it was found.

The scaled drawing (final sketch), like the rough and finished sketches, should be done in pencil since even the most skilled draftsmen make mistakes and the end result must be as nearly perfect as possible. **Reminder:** *The most convenient scale for sketches produced on 8.5" x 11" paper is 1/4" = 1 ft. as this is the scale used on drawing templates such as No. CST1 Crime Scene Template shown to the left. Due to page size, a scale of 1/8" = 1 ft. was used in the finished drawing to the right.*

Scaled Drawing



SK0001 Squad Car Sketch Kit

This compact kit contains the basic tools necessary for rough and finished sketches—the perfect tool for accident and crime scene investigation.



SK3000 Professional Crime Scene Sketch Kit

This kit is designed and outfitted with all the components for quick and professional crime scene sketching. A versatile drawing board enables on-the-spot sketching, diagramming and drafting up to 11" x 17" (27.9cm x 43.2cm) sheet size.

SK1000 Master Crime Scene Sketch Kit

This is a complete crime scene sketch kit used by the most progressive police departments worldwide. All the necessary components for quick and professional crime scene sketches are housed in a fold-out briefcase for use in the field or squad room.



SK800/SK900 Precision Steel Tape Measures

These quality tape measures are housed in an impact-resistant, fluorescent orange ABS case. The 3/8" wide flexible steel blades feature black and red markings on a yellow background. Each is covered with polycoat for longer life. Tape measures come with a folding steel hook designed to fit the hand while allowing rapid deployment and manual re-winding.



SK0001 CONTENTS:

- 1- KCP130 Pad of Graph Paper, 50 Sheets

- 1- KCP131 12" (30cm) Plastic Ruler
- 1- 712 Store Layout Template
- 1- 710 Office Plan Template
- 1- KCP132 30°/60°/90° Clear Plastic Triangle
- 1- KCP133 45°/45°/90° Clear Plastic Triangle
- 1- 1190i Lavatory Planning Template
- 1- 714 House Furnishings Template
- 1- KCP134 Mechanical Sketch Pencil
- 1- TT1 Traffic Template
- 1- TB100 "Sketches and Detailed Drawings of the Crime Scene"
- 1- SK0001C Vinyl, Leather-Finish Clipboard Folder; Dimensions: 9.5" x 12.75" x .5" (24.1cm x 32.4cm x 1.3cm); Weight: 1.52 lbs. (689g)

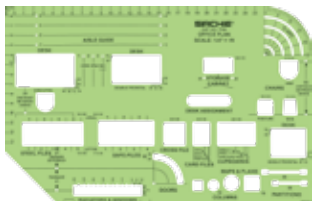
SK3000 CONTENTS:

- 1- SK3002 Portable Drawing Board
- 1- SK3003 Graduated Removable Straight Edge
- 1- SK3004 Protractor Drafting Head
- 1- SK3005 Reversible Feet (Set)
- 1- SK3006 Supplies Storage Pouch
- 10- SK3007 Sketching Paper, 11" x 17" (27.9cm x 43.2cm)
- 1- SK3008 Neck Strap
- 1- CST1 Crime Scene Template
- 1- TT1 Traffic Template
- 1- 1190i Lavatory Planning Template
- 1- 714 House Furnishings Template
- 1- 712 Store Layout Template
- 1- 710 Office Plan Template
- 1- KCP135 Universal Compass

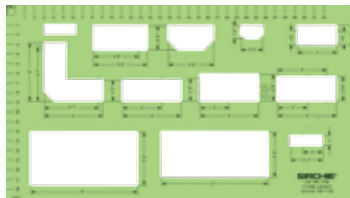
- 1- SK900 100 ft. (30m) Steel Rule
- 1- KCP136 Set of Prof. Drawing Instruments
- 1- TB100 "Sketches and Detailed Drawings of the Crime Scene"
- 1- SK3001 Vinyl Carrying Case w/ Handle; Dimensions: 20.5" x 17.25" x 2.375" (52.1cm x 43.8cm x 6cm); Weight: 5.91 lbs. (2.7kg)

SK1000 CONTENTS:

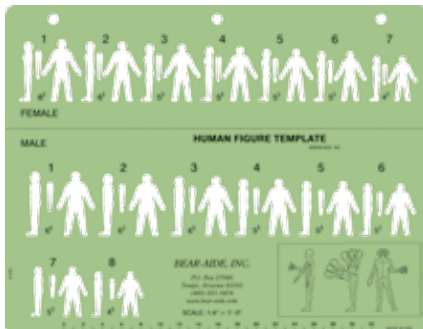
- 1- KCP130 Pad of Graph Paper, 50 Sheets
- 1- KCP131 12" (30cm) Plastic Ruler
- 1- KCP134 Mechanical Sketch Pencil
- 1- 1190i Lavatory Planning Template
- 1- 714 House Furnishings Template
- 1- 712 Store Layout Template
- 1- 710 Office Plan Template
- 1- KCP135 Universal Compass
- 1- SK800 50 ft. (15m) Steel Rule
- 1- KCP136 Set of Professional Drawing Instruments
- 1- KCP132 30°/60°/90° Clear Plastic Triangle
- 1- KCP133 45°/45°/90° Clear Plastic Triangle
- 1- TB100 "Sketches and Detailed Drawings of the Crime Scene"
- 1- SK1000C Vinyl, Leather-Finish, Briefcase-Type Carrying Case; Dimensions: 13.5" x 12.5" x 2.25" (34.3cm x 31.8cm x 5.7cm); Weight: 3.56 lbs. (1.6kg)



No. 710 Office Plan Template
(shown 20% of actual size)



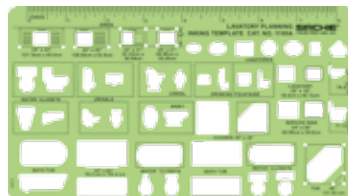
No. 712 Store Layout Template
(shown 20% of actual size)



No. HFT1 Human Figure Template (shown 20% of actual size)



No. LPET1 Latent Print Evidence Template
(shown 20% of actual size)



No. 1190I Lavatory Planning Template
(shown 20% of actual size)