

CHAPTER 6
PART II:
CLARIFYING THE FEDERAL RECORD ON THE ZAPRUDER FILM AND THE
MEDICAL AND BALLISTICS EVIDENCE

A. INTRODUCTION

Many students of the assassination believe that the medical evidence on the assassination of President Kennedy, in concert with the ballistics evidence and film recordings of the events in Dealey Plaza, is the most important documentation in the case, as indeed it would be in any homicide investigation. The Review Board believed that, in order to truly address the public's concerns relating to possible conspiracies and cover-ups relating to the assassination, it would need to gather some additional information on all three of these topics. The pages that follow detail the Review Board's efforts to develop additional information on these highly relevant and interesting topics.

B. MEDICAL EVIDENCE¹

The *President John F. Kennedy Assassination Records Collection Act of 1992* (JFK Act) did not task the Assassination Records Review Board with the mission of investigating the assassination or of attempting to resolve any of the substantive issues surrounding it. But the JFK Act did authorize the Review Board to pursue issues related to the documentary record, including the completeness of records and the destruction of records. In an informal discussion with the Review Board, Congressman Louis Stokes, former Chairman of the House Select Committee on Assassinations (HSCA), strongly encouraged the Review Board to do what it could to help resolve issues surrounding the documentary record of the autopsy. He advised the Board that the medical evidence is of particular importance and that he hoped that it would do all it could to complete the record. Despite being hampered by a 33-year-old paper trail, the Review Board vigorously pursued additional records related to the medical evidence and the autopsy, commencing in 1996.

1. Medical Issues

One of the many tragedies related to the assassination of President Kennedy has been the incompleteness of the autopsy record and the suspicion caused by the shroud of secrecy that has surrounded the records that do exist. Although the professionals who participated in the creation and the handling of the medical evidence may well have had the best of intentions in not publicly disclosing information—protecting the privacy and the sensibilities of the President's family—the legacy of such secrecy ultimately has caused distrust and suspicion. There have been serious and legitimate reasons for questioning not only the completeness of the autopsy records of President Kennedy, but the lack of a prompt and complete analysis of the records by the Warren Commission.

Among the several shortcomings regarding the disposition of the autopsy records, the following points illustrate the problem. First, there has been confusion and uncertainty as to whether the principal autopsy prosecutor, Dr. James J. Humes, destroyed the original draft of the autopsy report, or if he destroyed notes taken at the time of the autopsy. Second, the autopsy measurements were frequently imprecise and sometimes inexplicably absent. Third, the prosecutors were not shown the original autopsy photographs by the Warren Commission, nor were they asked enough detailed questions about the autopsy or the photographs. Fourth, the persons handling the autopsy records did not create a complete and contemporaneous accounting of the number of photographs nor was a proper chain of custody established for all of the autopsy materials. Fifth, when Dr. Humes was shown some copies of autopsy photographs during his testimony before the HSCA, he made statements that were interpreted as suggesting that he had

revised his original opinion significantly on the location of the entrance wound. These shortcomings should have been remedied shortly after the assassination while memories were fresh and records were more readily recoverable.

The first step taken by the Review Board in regard to the medical evidence was to arrange for the earliest possible release of all relevant information in the Warren Commission and HSCA files. Prior to the passage of the JFK Act, the files from the HSCA contained numerous medical records that had never been released to the public. After the JFK Act came into effect, but before the Review Board was created, the National Archives and Records Administration (NARA) released many of these records. Once the Review Board staff was in place in fall of 1994, it attempted to identify all remaining records that appeared to be connected to the medical evidence and arranged for their prompt release. All of these records were sent to NARA by early 1995 without redactions and without postponements.

The Review Board queried several government entities about possible files related to the autopsy, including the Bethesda National Naval Medical Center, the Armed Forces Institute of Pathology, the Naval Photographic Center, the Senate Select Committee on Intelligence (for Church Committee Records), and the President John F. Kennedy Library. The Review Board also attempted to contact all former staff members of the House Select Committee on Assassinations. With the exception of the autopsy photographs and x-rays, which are exempt from public disclosure under the JFK Act, the Review Board arranged for the release of *all* governmental records related to the autopsy. There are no other restricted records related to the autopsy of which the Review Board is aware.

The Review Board's search for records thereupon extended to conducting informal interviews of numerous witnesses, taking depositions under oath of the principal persons who created autopsy records, and arranging for the digitizing of the autopsy photographs.

There were many notable successes resulting from the Board's work, a few of which may briefly be mentioned here. With the generous

and public-spirited cooperation of the Eastman Kodak Company, NARA, the FBI, and a representative of the Kennedy family, the Review Board was able to provide secure transportation to ship the autopsy photographs to Rochester, New York, to be digitized on the most advanced digital scanner in the world. The digitized images will be capable of further enhancement as technology and science advance. The digitizing should also provide assistance for those who wish to pursue the question of whether the autopsy photographs were altered.² The Review Board also was able to identify additional latent autopsy photographs on a roll of film that had (inaccurately) been described as "exposed to light and processed, but showing no recognizable image." Again with the generous cooperation of Kodak, the latent photographs were digitized and enhanced for further evaluation. These digitized records have already been transferred to the John F. Kennedy Assassination Records Collection (JFK Collection) at NARA. Access to these materials is controlled by a representative of the Kennedy family.

On another front, through staff efforts, the Review Board was able to locate a new witness, Ms. Sandra Spencer, who worked at the Naval Photographic Center in 1963. She was interviewed by phone and then brought to Washington where her deposition was taken under oath in the presence of the autopsy photographs. Ms. Spencer testified that she developed post-mortem photographs of President Kennedy in November 1963, and that these photographs were different from those in the National Archives since 1966. In another deposition under oath, Dr. Humes, one of the three autopsy prosecutors, acknowledged under questioning—in testimony that appears to differ from what he told the Warren Commission—that he had destroyed both his notes taken at the autopsy and the first draft of the autopsy report. Autopsy prosecutor Dr. "J" Thornton Boswell, in an effort to clarify the imprecision in the autopsy materials, marked on an anatomically correct plastic skull his best recollection of the nature of the wounds on the President's cranium. The autopsy photographer, Mr. John Stringer, in detailed testimony, explained the photographic procedures he followed at the autopsy and he raised some questions about whether the

supplemental brain photographs that he took are those that are now in NARA. His former assistant, Mr. Floyd Riebe, who had earlier told several researchers that the autopsy photographs had been altered based upon his examination of photographs that have been circulating in the public domain, re-evaluated his earlier opinion when shown the actual photographs at NARA.

Perhaps the most challenging aspect of the Review Board's work on the medical evidence was the preparation and taking of the depositions of the principal persons with knowledge about the autopsy and autopsy records. Although conducting such work was not required by the JFK Act, the Review Board sought to obtain as much information as possible regarding the documentary record. Accordingly, it identified all of the still-living persons who were involved in the creation of autopsy records and brought virtually all of them to NARA. For the first time, in the presence of the original color transparencies and sometimes first-generation black-and-white prints, the witnesses were asked questions about the authenticity of the photographs, the completeness of the autopsy records, the apparent gaps in the records, and any additional information in their possession regarding the medical evidence. The witnesses came from as far away as Switzerland (Dr. Pierre Finck) and as close as Maryland (Dr. "J" Thornton Boswell). In conducting the depositions, the Review Board staff sought to approach the questioning in a professional manner and without prejudging the evidence or the witnesses.

Near the end of its tenure, the Review Board also took the joint deposition of five of the Dallas physicians who treated the President's wounds at Parkland Memorial Hospital on November 22, 1963.

There were three closely related problems that seriously impeded the Review Board's efforts to complete the documentary record surrounding the autopsy: a cold paper trail, faded memories, and the unreliability of eyewitness testimony. An example of the cold paper trail comes from Admiral George Burkley, who was President Kennedy's military physician and the only medical doctor who was present both during emergency

treatment at Parkland Memorial Hospital and at the autopsy at Bethesda Naval Hospital. In the late 1970s, at the time of the HSCA's investigation, Dr. Burkley, through his attorney, suggested to the HSCA that he might have some additional information about the autopsy. Because Dr. Burkley is now deceased, the Review Board sought additional information both from his former lawyer's firm, and from Dr. Burkley's family. The Burkley family said it did not possess any papers or documents related to the assassination, and declined to sign a waiver of attorney-client privilege that would have permitted the Review Board access to the files of Mr. Illig (also now deceased), Burkley's former attorney.

Memories fade over time. A very important figure in the chain-of-custody on the autopsy materials, and the living person who perhaps more than any other would have been able to resolve some of the lingering questions related to the disposition of the original autopsy materials, is Robert Bouck of the Secret Service. At the time he was interviewed he was quite elderly and little able to remember the important details. Similarly, the records show that Carl Belcher, formerly of the Department of Justice, played an important role in preparing the inventory of autopsy records. He was, however, unable to identify or illuminate the records that, on their face, appear to have been written by him.

Finally, a significant problem that is well known to trial lawyers, judges, and psychologists, is the unreliability of eyewitness testimony. Witnesses frequently, and inaccurately, believe that they have a vivid recollection of events. Psychologists and scholars have long since demonstrated the serious unreliability of peoples' recollections of what they hear and see. One illustration of this was an interview statement made by one of the treating physicians at Parkland. He explained that he was in Trauma Room Number 1 with the President. He recounted how he observed the First Lady wearing a white dress. Of course, she was wearing a pink suit, a fact known to most Americans. The inaccuracy of his recollection probably says little about the quality of the doctor's memory, but it is revealing of how the memory works and how cautious one must be when attempting to evaluate eyewitness testimony.

The deposition transcripts and other medical evidence that were released by the Review Board should be evaluated cautiously by the public. Often the witnesses contradict not only each other, but sometimes themselves. For events that transpired almost 35 years ago, all persons are likely to have failures of memory. It would be more prudent to weigh all of the evidence, with due concern for human error, rather than take single statements as “proof” for one theory or another.

C. ZAPRUDER FILM

In the spring of 1996, the Review Board began to consider how it might answer questions about chain-of-custody, or provenance, of selected film records, or enhance or better preserve selected film records.

1. Ownership of the Zapruder Film

Why is this [Zapruder] film so important? It is enormously important, if you want to know what happened in Dealey Plaza, this film shows you, as much as any film can. All queries and challenges to... [its]... authenticity, if this film is in government hands, can be satisfactorily overcome. When that is done, this film then becomes a baseline for all additional studies for what happened in Dealey Plaza... there should be a protocol established as for how a digitized copy is made with the state of the art equipment... that digitized copy, which is then fully authenticated, should then be the basis of all research in the future.

—Josiah Thompson,
April 2, 1997

At the time that Congress passed the JFK Act, Abraham Zapruder’s famous 8mm film depicting the death of President Kennedy was in the possession of NARA. The Zapruder film, which records the moments when President Kennedy was assassinated, is perhaps the single most important assassination record. In 1978, Abraham Zapruder’s son, Henry G. Zapruder, deposited the original Zapruder film with the National Archives for safekeeping. Legal ownership of the film, however, was still retained by the Zapruder family. As the Zapruder family stated upon transmission of the film to the National Archives, “the Film will be held by the Archives solely for storage purposes and... the Archives has acquired no rights whatsoever to the Film.”³

In March 1993, shortly after passage of the JFK Act, Henry Zapruder sought unsuccessfully to remove the original film from the National Archives. In October 1994, the

Zapruder family, through its attorney, again sought return of the original film. NARA declined to return the original film, knowing that the JFK Act may have affected the legal ownership status of the film.

Thereafter, NARA, the Review Board, and the Department of Justice sought to clarify the status of the original film under the JFK Act, including whether the U.S. government could legally acquire the original film and what the value of compensation to the Zapruder family would be under the takings clause of the Fifth Amendment. In addition, the U.S. government had numerous discussions with legal counsel for the Zapruder family regarding a legal “taking” of the film, the compensation to be accorded to the family, and copyright issues regarding the film.

In 1997, the Review Board deliberated, and ultimately asserted, its authority under the JFK Act to acquire legal ownership of the original Zapruder film. On April 2, 1997, the Review Board held a public hearing “to seek public comment and advice on what should be done with the camera-original motion picture film of the assassination that was taken by Abraham Zapruder on November 22, 1963.” The issue facing the Board was whether the Zapruder film was an “assassination record” that “should be in the JFK Collection at the Archives” and whether it “should... be Federal Government property rather than the property of private citizens.”⁵ The Review Board also had to consider how to acquire the film for the American people, whether through the exercise of a takings power or through negotiation with the Zapruder family.

At its April 1997 hearing, the Review Board heard testimony from six experts who addressed a variety of issues, including the constitutional and legal issues involved in effecting a “taking” of the film and the benefits in having U.S. government ownership of the original film. Following the Zapruder film hearing, the Review Board held an open meeting on April 24, 1997, and resolved to secure legal ownership of the original Zapruder film for the American people. The Board’s “Statement of Policy and Intent with Regard to the Zapruder Film,” adopted unanimously by the Board, resolved: (1) that the Zapruder film was an assassination record within the mean-

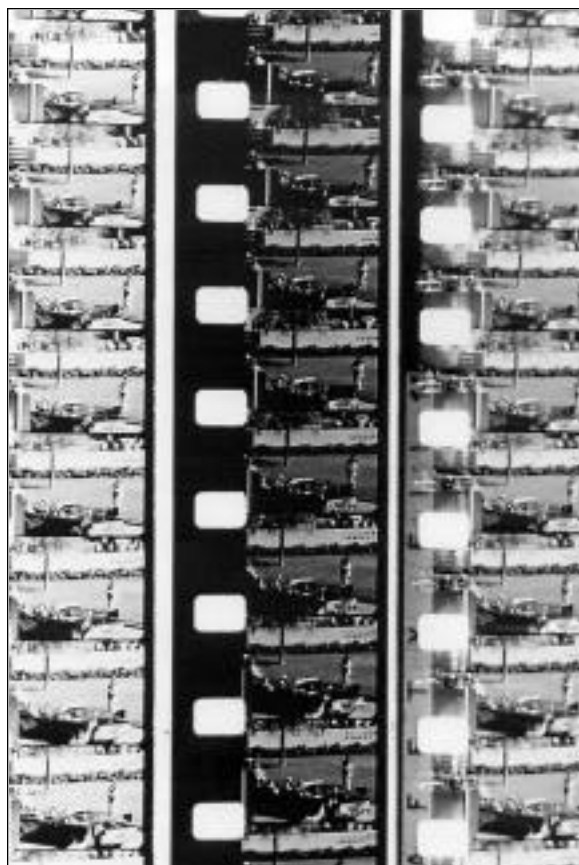
ing of the JFK Act; (2) that the Board would attempt to ensure that the best available copy of the film be made available to the public at the lowest reasonable price; (3) that the Board would work cooperatively with the Zapruder family to produce the best possible copy for scholarly and research purposes, establish a base reference for the film through digitization, and to conduct all appropriate tests to evaluate authenticity and to elicit historical and evidentiary evidence; and (4) that the original film be transferred to the JFK Collection on August 1, 1998 and that the Review Board would work with Congress to resolve this issue.

In June 1998, Congressman Dan Burton, Chairman of the House Committee on Government Reform and Oversight, which oversees the work of the Review Board, wrote to the Department of Justice expressing Congressional support for the efforts of DOJ to carry out the “Board’s commitment to ensuring that the original Zapruder film remains in the custody of the American people as the most important ‘assassination record.’”⁶ At the time of this Report, the Department of Justice was engaged in negotiations with the Zapruder family to resolve all outstanding issues relating to the legal transfer of the film from the family to the U.S. government, including the issue of compensation to be paid to the family for the film. The transfer of the original Zapruder film to the JFK Collection was effective August 1, 1998.

2. Staff Examinations of Films Designated as “In-Camera” Original, and First Generation Copies, by NARA

The Review Board determined that there should be an examination of the Zapruder films at NARA designated as the original and the two Secret Service copies (believed to be first generation copies) for the purpose of recording characteristics of the three films. (See illustration.) (The Review Board subsequently determined that the LMH Company—the Zapruder family’s company—possessed a third first generation copy of the Zapruder film.) The Review Board hoped that the recorded observations would serve to provide information to a public that would not be able to obtain physical access to these films, and second, would determine whether the film should be examined by photo-

graphic experts. Ultimately, the staff recommended, and the Review Board agreed, that it would approach Eastman Kodak to request that Kodak examine the Zapruder film.



3. Eastman Kodak’s *Pro Bono* Work for the Review Board Related to the Zapruder Film (and Autopsy Photographs)

The Review Board first met with the Eastman Kodak Company in June 1996 in Washington to discuss a wide variety of possible research topics related to a host of potential film issues. At that time, Kodak stated that it would provide a limited amount of *pro bono* work for the Review Board. The Review Board continued discussions with Kodak laboratory officials based in Rochester, New York, and subsequently met with Kodak technical experts James Milch and Roland Zavada in Washington, D.C. At that meeting, the Review Board identified three major areas of interest, only one of which related to the Zapruder film: (1) the possible digitization and enhancement of the Zapruder film, as well as edge print analysis of the original and first generation copies, and study of the optical characteristics of the Zapruder cam-

era in relation to perceived “anomalies” in the original film; (2) the possible enhancement and, if necessary, optical (*i.e.*, film, not medical) analysis of autopsy images; and (3) a study of the provenance of film materials subpoenaed by the Review Board from Robert J. Groden for examination. Kodak laboratory experts Milch and Zavada viewed the original Zapruder film, a Secret Service first generation copy, and some of the Groden materials for the first time at NARA during their September 1996 visit to Washington.

To call Zapruder’s film remarkable is an exaggerated understatement. It is, due to the subject matter and the clear angle of view undoubtedly one of the most historically important, if not the most important, movie films ever made.

—Richard Trask, April 2, 1997

Kodak subsequently offered to contribute up to \$20,000 of labor and materials to the Review Board in *pro bono* work—the equivalent of roughly 35 days of effort. Kodak confirmed, at a meeting with the Review Board in August of 1997, that Zavada, a retired Kodak

film chemist who was formerly Kodak’s pre-eminent 8 mm film expert, was the consultant that Kodak had hired to: (1) attempt to write a “primer” explaining the optical and mechanical operating characteristics of Abraham Zapruder’s 8 mm Bell and Howell home movie camera; (2) explain the relationship, if any, between the camera’s operating characteristics and perceived “anomalies” in the original film; and (3) answer questions about the provenance of the original film and the first generation copies. (“Provenance” issues that Mr. Zavada took on included studying the chain-of-custody documents executed in November 1963 by Abraham Zapruder; conducting interviews of surviving personnel involved in the development of the original film, and the exposure and developing of the three first generation copies; and studying manufacturer’s edge print, processing lab edge print, and the physical characteristics of the optical printer believed to have been used to create the three first generation copies on November 22, 1963.)

In addition, in August 1997 James K. Toner, the Laboratory Head of Kodak’s Imaging Science Resources Lab in Rochester, presented a methodology for making the best possible direct digitization of the original Zapruder film. Kodak also began to make arrangements with NARA and the Review Board for

the digital preservation and enhancement of the autopsy images of President Kennedy, under the direct guidance of Toner.

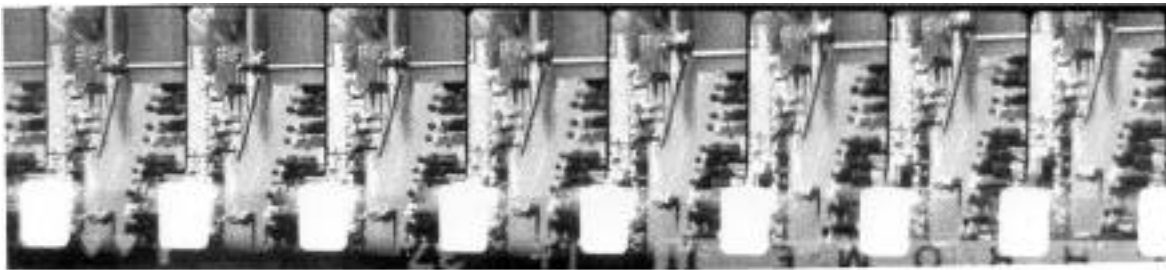
In September 1997, Toner and Zavada visited Washington and, in addition to studying selected autopsy film and x-ray images at NARA, they also studied perceived anomalies in the inter-sprocket areas of the original Zapruder film, and the emulsion characteristics and edge print characteristics of what NARA presumed to be the camera-original Zapruder film and the two Secret Service first generation copies. (See the 3 illustrations on page 121.) Following this visit, Zavada began writing his extensive report on Zapruder film issues, which expanded in scope as his research into camera optics and printer characteristics continued. This report was scheduled for completion by Kodak no later than September 30, 1998; six copies were scheduled for deposit at NARA in the JFK Collection.

Kodak ultimately spent approximately \$53,000 on work related to the digitization and enhancement of the President’s autopsy images, and approximately \$11,000 on work related to Zapruder film issues, significantly exceeding its original estimate of donated labor and materials. The Review Board gratefully acknowledges the public service provided to the American people by the Eastman Kodak Company.

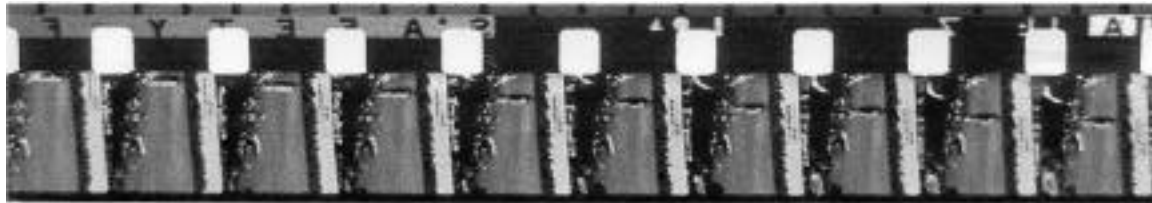
4. The Review Board Staff’s Study and Clarification of Paul Hoch’s FOIA Lead “CIA Document 450”

The Review Board staff located and interviewed two former employees of the CIA’s National Photographic Interpretation Center (NPIC) and questioned them about “CIA Document 450,” a 1970s Freedom of Information Act release—original document undated—that indicates NPIC had a version of the Zapruder film, made “internegatives” and “copies,” conducted a “print test,” and performed a shot-and-timing analysis based on interpretation of the film’s content.

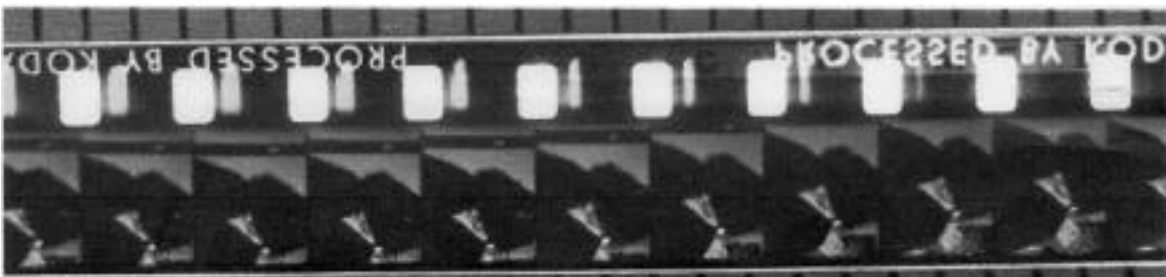
Both individuals indicated that the internegatives made were of single frames only, and the prints made (from these same internegatives) were of single frames only—for brief-



Manufacturing Markings on Zapruder "Out-of-Camera" Original Film Showing: Product, Machine, Strip and Date Markings



Manufacturing Edge Print on Secret Service Copy 1, Motorcade Scene of the Original. Showing: Portion "K11A" of Product Name, Machine, Strip, Date and Safety Film Markings.



Processing Edge-Print on Secret Service Copy and Original Processing Edge Print Printed-Through

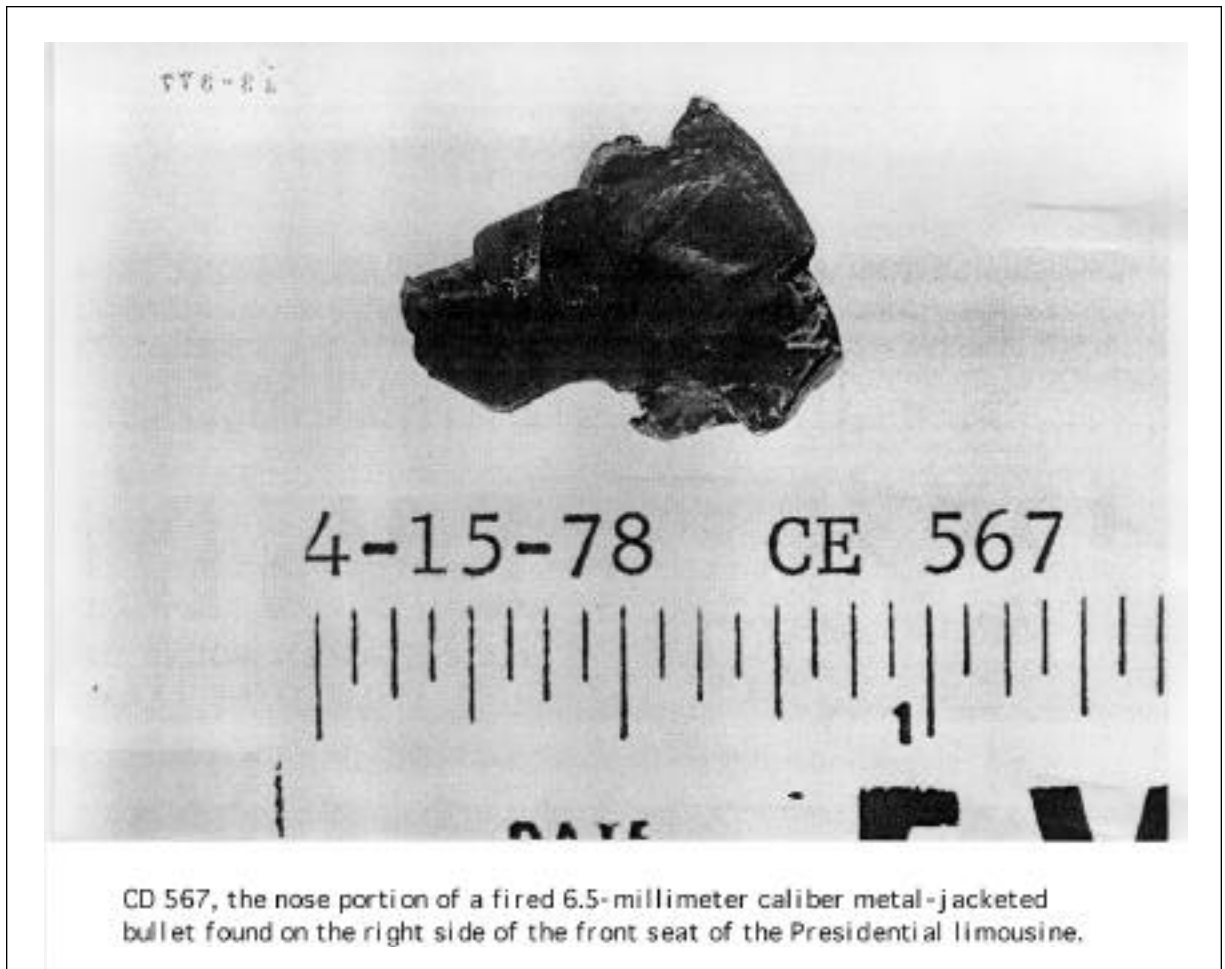
ing boards—and that they never reproduced (or altered) the film as a motion picture. They identified portions of the document related to this activity—magnification and reproduction of small motion picture frames as prints. To this extent, the document has been demystified. However, other questions, such as who conducted the shot-and-timing analysis, and who assembled the briefing boards, remain unanswered.

D. Ballistics

In April 1995, a member of the public wrote to Attorney General Janet Reno to advise her that Warren Commission Exhibit 567 (CE 567)—a bullet fragment—may have embedded in it tiny strands of fiber that the writer believed came from President Kennedy's

shirt collar. [See illustration.] In January 1996, John Keeney, Acting Assistant Attorney General, wrote to FBI Director Louis Freeh requesting that the FBI "initiate an inquiry into specific aspects of the assassination theory related to collected bullet fragments and residues now in the possession of the federal government."

The Review Board determined that the Firearms Examination Panel of the HSCA recommended analysis of CE 567 more than 19 years ago. For unknown reasons, the Panel's recommendation did not appear in the HSCA's March 1979 final report. The Review Board contacted former HSCA staff members to determine why this recommendation was deleted from the draft when the final HSCA report was published, but the



former HSCA staff members and Firearms Panel members contacted were not able to provide a reason for the omission of the recommendation.

In March 1996, the Review Board, the FBI, the Department of Justice, and NARA began a series of meetings to discuss re-examination of the ballistics evidence. In June 1996, the FBI provided its report to the Review Board and stated that “a complete fiber analysis could be conducted on the fibrous debris adhering to CE 567 and the materials composing the shirt and the tie [of President Kennedy].”

In August 1998, after lengthy consideration about whether the testing would be appropriate, NARA finally agreed to allow limited testing of CE 567 to complete the earlier recommendation of the HSCA’s Firearms Panel. NARA also determined that the bullet fragment should be tested for “suspected biological tissue and/or organic material,” the presence of which was noted by the HSCA in 1978 and the FBI in 1996.

In September 1998, testing began on CE 567 and, at the time of this writing (September 1998), was ongoing. NARA will issue its report on the results of the testing in October 1998.

CHAPTER 6
PART II: ENDNOTES

1 Most of the section of this Report relating to medical evidence and medical issues was printed and distributed to the public in a Staff Report dated July 31, 1998 when the Review Board released its deposition transcripts and written reports of unsworn interviews relating to medical issues.

2 Although the Review Board does not offer opinions on the substantive issues related to the assassination, it believes that trained medical personnel will possibly be able to provide additional illuminating explanations regarding the autopsy after examining the enhanced images. It should be noted, however, that although the digitizing significantly enhanced the clarity of the images, many questions are likely to remain unanswered.

3 July 10, 1978 Letter from Henry G. Zapruder to James Moore, National Archives.

4 Transcript of Review Board Proceedings, Hearing on the Status and Disposition of the "Zapruder Film," April 2, 1997, at 5 (statements of Chairman Tunheim).

5 *Id.*, at 11 (statements of General Counsel Gunn).

6 June 5, 1998 Letter from Chairman Burton to Frank W. Hunger, Assistant Attorney General for the Civil Division.