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CRIMINAL DISTRICT COURT

PARISH OF ORLEANS

STATE OF LOUISIANA

JOHN NEEDS  
Department of Pathology and Oncology  
University of Kansas Medical Center  
Kansas City, Kansas 66103

.....  
STATE OF LOUISIANA

198-059

VERSUS

1426(30)

CLAY L. SHAW

SECTION "C"  
.....

167

PROCEEDINGS IN OPEN COURT,  
FRIDAY, FEBRUARY 21, 1969  
AND  
SATURDAY, FEBRUARY 22, 1969

B E F O R E: THE HONORABLE EDWARD A. HAGGERTY, JR.,  
JUDGE, SECTION "C"

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I N D E X

<u>WITNESS:</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>REXCROSS</u>
ROBERT A. FRAZIER	1	71	186	193

E X H I B I T S

<u>NUMBER</u>	<u>IDENTIFIED</u>	<u>OFFERED</u>	<u>RECEIVED</u>
S-61	88 - 97	97	97
S-62	91 - 99	99	100
S-63	92 - 100	94 - 101	101
S-64	92 - 149	94 - 150	150
S-65	94 - 162	162	163
S-66	152	156	156

ROBERT A. FRAZIER,

a witness for the Defense, after first being duly sworn by The Minute Clerk, was examined and testified as follows:

DIRECT EXAMINATION

MR. DYMOND:

Your Honor, we would like to announce to The Court that we intend to proceed to qualify Mr. Frazier to testify as an expert in the field of ballistics.

THE COURT:

Very well.

BY MR. DYMOND:

Q Mr. Frazier, for the record would you please state your full name.

A Robert A. Frazier.

Q And what is your employment, Mr. Frazier?

A I am a Special Agent of the Federal Bureau of Investigation assigned to the Federal Bureau of Investigation Laboratory in Washington, D.C.

Q Now do you have any specialized duties in connection with your work with the Federal Bureau of Investigation?

1 A I am presently employed as the Chief of the  
2 Firearms & Tool Marks in the Physics and  
3 Chemistry Section.

4 Q Mr. Frazier, have you had any specialized  
5 training in the field of ballistics?

6 A Yes, sir, I have.

7 Q Would you kindly give us a resume of this  
8 training which you have had?

9 A Following a science degree which I received in  
10 1940 from the University of Idaho I  
11 entered the F.B.I. Laboratory and received  
12 the specialized training given by the  
13 firearms identification specialist in the  
14 laboratory working towards the position of  
15 firearms identification specialist. This  
16 training lasted approximately one year and  
17 involved all aspects of firearms work, that  
18 is comparing bullets with firearms; compar-  
19 ing cartridge cases with firearms to  
20 determine whether or not the bullet or  
21 cartridge case were fired in a particular  
22 weapon. It included examining ammunition  
23 components to determine their manufacturer  
24 and calibre and the type of weapon from  
25 which they may have been fired based on

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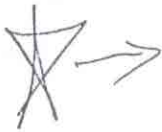
rifling characteristics impressed for instance in a fired bullet. It included making gun pattern tests, shot pattern tests, noting the effect of projectiles such as bullets fired against glass; the type of break, the type of bullet holes produced.

This course involved comparing thousands of specimens, examining firearms of a great variety of types, both rifles, pistols, shotguns, submachine guns and so forth. I completed that training period, the specialized training course, in approximately one year and since that time have been assigned to the work of making firearms identification and tool marks identification.

Q Mr. Frazier, have you had any published works in the field of ballistics?

A Only one which consisted of a pamphlet published by the Federal Bureau of Investigation which was printed in the law enforcement bulletins and reprinted for citizens and law enforcement agencies.

Q Were you the author?



1 A I wrote the pamphlet but Mr. Hoover was the  
2 author as published.

3 Q Have you been qualified as an expert in the  
4 field, sir, of ballistics in any court?

5 A Yes, sir, I have.

6 Q If so, what courts?

7 A I have testified in all of the States except  
8 Vermont, including Alaska and Hawaii, but  
9 I have not testified in all federal courts  
10 but in all state courts.

11 MR. DYMOND:

12 If The Court please, we submit Mr. Frazier  
13 as an expert in the field.

14 MR. OSER:

15 No questions.

16 THE COURT:

17 It's submitted? I will rule that the  
18 witness, Mr. Frazier, has been quali-  
19 fied as an expert in the field of  
20 ballistics and can give his opinion  
21 in that field.

22 BY MR. DYMOND:

23 Q Mr. Frazier, at any time after November 22,  
24 1963 did you have occasion to examine the  
25 vehicle in which President Kennedy was

1 riding at the time of his assassination?

2 A Yes, sir, I did.

3 Q Where and when, sir, did this examination  
4 take place?

5 A It took place in the United States Secret  
6 Service Garage in Washington, D.C. My  
7 examination began at approximately 1:00  
8 o'clock on the morning of November 23 and  
9 ended about 4:30 that same morning.

10 Q Yes, sir., I see. In connection with your  
11 examination of this vehicle did you have  
12 occasion to particularly examine the  
13 windshield of the automobile?

14 A Yes, sir.

15 Q Did you find anything unusual about the wind-  
16 shield and if so, please describe that  
17 condition?

18 A The windshield was partially broken in a  
19 star-shaped fashion, that is there was a  
20 crack in the windshield. I made a speci-  
21 fic examination of it to determine what  
22 caused the crack. I found on the inside  
23 surface of the windshield a deposit of  
24 lead which had been forced against the  
25 glass and had splattered and as a result

1           determined the glass had been broken by     6  
2           the impact of a projectile striking the  
3           inside surface of the glass and fracturing  
4           the windshield in the outer layer.

5     Q     Upon what did you base your determination that  
6           the glass had been hit by a projectile  
7           hitting the inside rather than the out-  
8           side?

9     A     As a result of having examined hundreds of  
10           pieces of glass which have been broken in  
11           a known fashion, that is by a blow deli-  
12           vered in a known way, it is possible by  
13           studying the radial cracks or fractures  
14           emanating from the point of force to deter-  
15           mine the side of the glass on which the  
16           force was applied.

17           Using the stress lines left on this  
18           glass at the time the glass was broken and  
19           caused by the object which broke the glass  
20           it is possible to determine the direction  
21           the force was applied. This examination  
22           of the cracks showed that the pressure had  
23           been applied on the inside surface.

24     Q     Now the opinion which you formed as to which  
25           side of the windshield had been hit,



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Mr. Frazier, was that a definite opinion or was there any doubt in your mind as an expert?

A It is a definite conclusion.

Q Now, Mr. Frazier, other than the windshield of the automobile, could you tell us what particular examinations were conducted with other parts of this vehicle?

A Yes, sir. The first examination which was made was of the exterior portions of the vehicle. We examined the outer surface of the hood, the grille area, both front fender areas, all the metal work on the outside of the automobile. The examination was for two purposes, to determine whether there were any bullets or other projectile impact areas on the outside of the car and also to note the presence of the foreign material deposited on it. We found blood and tissue all over the outside areas of the vehicle from the hood ornament, over the complete area of the hood, on the outside of the windshield, also on the inside surface of the windshield, and all over the entire exterior

*both sides*



1 portion of the car, that is, the side rails  
2 down both sides of the car, and of course  
3 considerable quantities inside the car and  
4 on the trunk lid area.

5 We found however, no bullet holes or  
6 projectile marks.

7 Q Did you find any impact areas on this automo-  
8 bile?

9 A Nothing which could be identified as a bullet  
10 impact area except the one on the inside  
11 of the windshield.

12 Q Now, Mr. Frazier, in connection with your  
13 examination of this vehicle did you find  
14 any portions of projectiles, bullet  
15 projectiles?

16 A I can say that we found fragments of lead which  
17 may have originated from a bullet.

18 Q How many did you find?

19 A There were three fragments found on the carpet  
20 in the rear or passenger compartment.

21 Q Now when you say rear or passenger compartment,  
22 that included the area of the jump seats?

23 A Yes, sir, these fragments were in fact found  
24 under the area on the left-hand jump seat.

25 Q And you say three?

1 A Yes.

2 Q If you remember, or if you have in your notes  
3 the necessary information would you tell  
4 us the size of the three particles you  
5 found?

6 A They weighed 9/10ths of a grain, 7/10ths of a  
7 grain, and 7/10ths of a grain, each being  
8 less than 1 grain in weight. A grain I  
9 may or should say is 1/7,000ths of a  
10 pound and is a unit of measurement in  
11 weighing bullets, comparing one bullet  
12 weight with another.

13 Q Now, did you have occasion to work with  
14 Mr. Lyndell Schaneyfield, also an F.B.I.  
15 Agent in the reenactment of the assassin-  
16 ation scene?

17 A Yes, sir, I did.

18 Q Did this take place in Dallas?

19 A Yes, sir.

20 Q Could you tell us when that took place?

21 A On May 24, 1964.

22 Q Now, Mr. Frazier, what was the purpose of this  
23 examination and reenactment, what were you  
24 seeking to learn from it?

25 A I was involved in this reenactment as an

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adviser or consultant to the Warren Commission in an effort to reconstruct the testimony of various witnesses according to the Commission's records, to determine whether or not this testimony was feasible and possible and to determine whether it could have, that is the assassination could have occurred as these witnesses have advised.

Q Could you tell us the mechanics of the reenactment that was conducted by you and Mr. Schaneyfield and others?

A In the first place the presidential limousine in which the President was shot was not available so therefore a Cadillac limousine was substituted and individuals were placed in this car as stand-ins for the President and Governor John Connally.

The position of the people in the car were adjusted by the Commission according to information that developed from studying various movie films and still films, particularly one taken by Abraham Zapruder. The relative elevation of the President was adjusted by having him sit on blankets

*Wrong*

3  
1 so that his position with reference to  
2 Governor Connally at the time of the  
3 assassination would be duplicated in the  
4 stand-ins.

5 The position left and right, that is  
6 from side to side, was also positioned as  
7 nearly as possible as could be duplicated.

8 The automobile itself was placed on  
9 the street as nearly as possible as could  
10 be duplicated from studying various films  
11 and also driven down this street as movies  
12 were taken. Then it was driven down the  
13 street and stopped at various places so  
14 additional photographs could be taken and  
15 certain measurements made and then finally  
16 a photograph was made of the entire process  
17 with the, with a movie camera attached to a  
18 rifle on which a telescopic sight was  
19 fixed, that is a movie was taken through  
20 a telescopic sight.

21 Q What was your particular function in this  
22 reenactment, Mr. Prazier?

23 A I was stationed in the southeast corner of the  
24 Texas School Book Depository Building on  
25 the sixth floor in a partially, at a

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partially open window and directed the position of the car with reference to a large tree which exists in front of this building, advising the men on the street when they should stop the car, at what time the President's stand-in was visible through the foliage and had cleared the foliage and so forth.

Q And you say you were in the window of the Book Depository?

A Yes, sir.

Q On the sixth floor?

A Yes, sir.

Q Now in connection with this reenactment, Mr. Frazier, did you use the Zapruder films?

A Yes, sir, we did.

Q Now with respect to frame 313 of the Zapruder film, which is the frame in which it is obvious from the film that the President was shot in the head, at the time when the reenactment vehicle was in the same spot as was the presidential vehicle according to the Zapruder film, at the time of frame 313, was there a clear shot from the sixth

1 floor depository window to the head of the 13  
2 stand-in for the president?

3 A Yes, there was.

4 Q Now by studying the Zapruder film are you able  
5 to tell with any certainty in what frame  
6 the President had been hit for the first  
7 time?

8 A That could not be definitely established in  
9 my opinion for two reasons: One, it is  
10 not known what the reaction time of the  
11 President was after he was shot and it is  
12 not clear in the picture as to which frame  
13 he begins to show reaction and therefore  
14 you cannot determine exactly, you may be  
15 able to approximate the frame number.

16 Q Let me ask you if prior to frame 313, that is  
17 the position the vehicle was in at that  
18 time, had there been any other clear shots  
19 established at the presidential stand-in?

20 A From the sixth floor depository window, yes,  
21 sir, I would say that from frame 207 on  
22 the car had cleared the tree.

23 Q Now, Mr. Frazier, did you have occasion to ex-  
24 amine the rifle which was found on the  
25 sixth floor of the Texas School Book

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Depository?

A Yes, sir, I did.

Q What type of rifle was that?

A It is a 6.5 millimeter Italian military rifle  
and it is referred to as a Mannlicher-  
Carcano rifle in this country.

Q Did it have a telescopic sight?

A Yes, it did.

Q What power?

A A four-power telescopic sight.

Q Mr. Frazier, I show you a weapon introduced in  
evidence and marked State-18 and ask you  
whether that is the same type of rifle  
which you examined?

A Generally, this is the same rifle. The color  
of the stock is different. This rifle  
is polished and blued whereas the other  
had a rough finish. I cannot read all the  
inscription on here.

THE COURT:

Would you get that magnifying glass out of  
my desk drawer.

THE WITNESS:

I would say this rifle is similar and has  
some different markings on it, namely



1           there is no inscription of "made in Italy"  
2           as there was in the other and the tele-  
3           scopic sight is mounted in a different  
4           position and in a different manner.

5           BY MR. DYMOND:

6           Q       Would you say the rifle is similar to the one  
7                    found on the sixth floor of the Depository  
8                    Building?

9           MR. OSER:

10           I object, Your Honor, because there is no  
11                    testimony where the other rifle was  
12                    found.

13           THE COURT:

14                    What he wants to know is whether this  
15                    rifle is similar to the one he  
16                    examined.

17           MR. OSER:

18                    My objection is that this agent was not  
19                    on the sixth floor Depository when  
20                    the rifle was found.

21           THE COURT:

22                    Will you rephrase your question?

23           MR. DYMOND:

24                    I will rephrase it.

25           BY MR. DYMOND:

1 Q Is it similar to the one he examined? 16

2 MR. OSER:

3 I object, Your Honor.

4 MR. DYMOND:

5 With respect to this objection, if it is a  
6 good objection it has come very late.  
7 This witness already testified, and  
8 it is in the record, that he ex-  
9 amined the rifle found on the sixth  
10 floor of the Book Depository.

11 MR. OSER:

12 There has been no chain set up as to how  
13 the agent got the rifle and we don't  
14 know which rifle.

15 THE COURT:

16 I will overrule the objection. The  
17 testimony is this rifle has been  
18 introduced as being similar to the  
19 rifle allegedly used and I believe  
20 Mr. Dymond's question is that is the  
21 rifle in court similar to the rifle  
22 he examined.

23 MR. OSER:

24 I have no quarrel with that if it was  
25 similar to the rifle this agent

1 examined.

17

2 BY MR. DYMOND:

3 Q What was your answer to that?

4 A I would say it is generally similar, yes.

5 Q With respect to the telescopic sight on this  
6 rifle is it similar to the one on the rifle  
7 you examined?

8 A Yes, it appears to be an identical telescopic  
9 sight, too, but however the mount, the way  
10 it is mounted is different.

11 Q I see. Now, Mr. Frazier, the rifle which you  
12 examined, is that a clip-fed rifle?

13 A Yes, sir.

14 Q How many cartridges?

15 A Seven, six in the clip and one in the rifle.

16 Q Now, from your reenactment of the assassination  
17 scene, and your work with the Zapruder  
18 film, were you able to determine with any  
19 degree of accuracy what the space in time  
20 was between the first shot and the last  
21 shot that was fired at the President?

22 MR. OSER:

23 Your Honor, he hasn't established when the  
24 first and last shot was fired.

25 MR. DYMOND:

1 Your Honor, if he doesn't know he can say. 1

2 THE COURT:

3 I thought he answered your question a  
4 few moments ago but I can't comment  
5 on the evidence. Go ahead and ask  
6 your question.

7 BY MR. DYMOND:

8 Q Were you able to determine with any degree of  
9 accuracy the time span between the first  
10 and the last shots fired at President  
11 Kennedy?

12 A No, sir, not within even several seconds.

13 Q Now, did you conduct any firing speed tests  
14 and accuracy tests with the rifle which  
15 you examined?

16 A Yes, sir, I did.

17 Q Where were these tests conducted?

18 A In the indoor range in the F.B.I. Building,  
19 Washington, D.C. and the outdoor range,  
20 the F.B.I. range at Quantico, Virginia.

21 Q Tell us the mechanics and extent of the tests  
22 and give us the result of the tests.

23 A The first test performed was performed primari-  
24 ly, primarily for accuracy but also for  
25 maintaining a rapid rate of fire. These

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tests were performed at 45 feet in the indoor range with artificial light firing at a target with the rifle and with the four-power telescopic sight mounted on it.

The tests which I fired at that 45-foot distance consisted of three shots fired in a span of 5.9 seconds, that is from the time the first shot was fired until the third shot was fired.

The tests consisted of firing, reloading and firing, reloading and firing the third time so that a total of three shots were fired.

The tests conducted at the 75-foot distance consisted of two three-shot groups also fired for accuracy and speed. These consisted of a group fired in approximately a 2 inch circle at 75 feet in a period of 4.8 seconds, and a series of shots fired in a group which would be all-encompassed in a 5 inch circle which was fired in a time of 4.6 seconds.

I believe I left out the accuracy measurement for the first 45 foot target. In that target the three shots fired could

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be covered by a quarter.

The third set of tests consisted of four targets situated at 300 feet in the outdoor range in daylight.

In those four targets, first I'll give you the time interval and then the size of the pattern formed by the three shots that were fired in each of those tests. These three shots in the first test were fired in 5.9 seconds and they landed in a 3½ inch circle; the second test was fired in 6.2 seconds, the three shots landed in a 4 inch circle and -- I should say 4½ to 5 inch circle. The third test was fired in 5.6 seconds, the three shots landed in a 3 inch circle and the last one was fired in 6.5 seconds and these shots landed in a 3½ inch circle.

This test also was conducted both for accuracy and for speed.

Q Now, Mr. Frazier, what was the reason for choosing those particular distances for these tests?

A The first distances were chosen by me mainly to determine whether the weapon was

1 accurate and were the two distances avail- 21  
2 able in the F.B.I. indoor range, that is,  
3 45 feet and 75 feet and artificial light  
4 for targets.

5 The outdoor distance was chosen as  
6 100 yards or 300 feet as being longer  
7 than any distance at which President  
8 Kennedy could have been fired upon from  
9 a person firing from the Texas School  
10 Book Depository Building.

11 Q Now in feet, what was the distance from the  
12 sixth floor window of the Texas School  
13 Book Depository Building and the spot on  
14 Elm Street where the reconstruction  
15 vehicle was in frame 313 of the Zapruder  
16 film?

17 A 265 feet.

18 Q Now, you have told us you recovered three  
19 bullet particles from the presidential  
20 limousine --

21 MR. OSER:

22 I object, Your Honor, as he didn't say any-  
23 thing about cartridges being fired --

24 THE COURT:

25 Finding cartridges in the car?

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MR. DYMOND:

I didn't say cartridges, Your Honor.

BY MR. DYMOND:

Q Were any other projectiles or pieces of  
projectiles made available to you in  
connection with your tests?

THE COURT:

What?

MR. DYMOND:

Tests.

THE WITNESS:

Yes, sir, I had them in the laboratory.

BY MR. DYMOND:

Q What other projectiles or portions of the  
projectiles did you have?

A| In addition to those there were two bullet  
fragments, the nose section and base  
section, recovered by the secret police  
and delivered to me at the laboratory.  
Then there were additional other fragments  
another two fragments from the President's  
head and one fragment from the arm of  
Governor Connally.

Q Did you have made available to you any intact  
or almost intact bullet projectiles?

VP 3

*one*



1 A Yes, sir, I did. That one was submitted to  
2 me --

3 MR. OSER:

4 I'm going to object unless the officer  
5 found it.

6 MR. DYMOND:

7 If The Court please, one thing which The  
8 Court is empowered to take judicial  
9 cognizance is, is the fact of his-  
10 tory. I am trying to say this in  
11 such a way that it can be properly  
12 said before the Jury.

13 MR. OSER:

14 Then I ask that the Jury be taken out.

15 (JURY EXCLUDED.)

16 THE COURT:

17 Let me first hear the objection and then  
18 your reply.

19 MR. OSER:

20 My objection is merely that the officer  
21 can testify to what he examined in  
22 this case but he cannot testify where  
23 these particular things were found.  
24 I know what Mr. Dymond is leading up  
25 to and that is the cartridges found

1 in the sixth floor of the Depository. 24

2 THE COURT:

3 What is your reply, Mr. Dymond?

4 MR. DYMOND:

5 First of all I didn't have reference to  
6 cartridge cases found on the sixth  
7 floor of the Depository but I have  
8 reference to an almost intact pro-  
9 jectile which was found on the  
10 stretcher of President Connally,  
11 rather Governor Connally at the  
12 Parkland Hospital in Dallas.

13 I said before, as I said before,  
14 one thing The Court does have the  
15 power to do and that is to take  
16 judicial cognizance of the facts of  
17 history. It is a fact of history  
18 that a projectile was found on this  
19 stretcher in the Parkland Hospital  
20 and I think this witness does have  
21 the right to say that this projectile  
22 was turned over to him for examina-  
23 tion. That is what we are asking.

24 MR. OSER:

25 It is not my objection about the officer

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testifying that he made an examina-  
tion on Commission Exhibit 399 which  
was turned over to him but my objec-  
tion was where it was found. That is  
my objection.

MR. DYMOND:

If The Court please, that is a fact of  
history.

MR. ALCOCK:

Your Honor, the Warren Report is also a  
fact of history and Mr. Dymond is  
asking This Court to take judicial  
cognizance of the Warren Report and  
all its findings and conclusions and  
this is naturally in the Warren  
Report, Exhibit 399 and this in ef-  
fect would be doing that.

MR. DYMOND:

If The Court please, I am not asking Your  
Honor to take judicial cognizance of  
the Warren Report.

THE COURT:

I would suggest, Mr. Dymond, I think  
Mr. Oser's objection bears to the  
identity of the object itself. He

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would have no objection if you would ask Mr. Frazier to give his expert opinion as to what was handed to him and the examination he conducted and if you want you can call it "Exhibit 399 of the Warren Report" if you wish and he can identify the object as either a spent bullet intact unmarked and he could give you his opinion as to what he found out and how it compared with the fragments but I agree with Mr. Oser you cannot say that it was found on the stretcher because he wasn't there and either you would have to have the person that found it to testify to its position, the link of possession to prove it's the exact bullet. However, I would let him give an expert opinion as to what was given to him and then let the Jury draw its own inference.

MR. DYMOND:

Very well, we will proceed that way.

(JURY RETURNED.)

1 BY MR. DYMOND:

27

2 Q Mr. Frazier --

3 THE COURT:

4 You may proceed.

5 BY MR. DYMOND:

6 Q Mr. Frazier, was an intact or almost intact  
7 bullet projectile turned over to you for  
8 examination in the course of your tests?

9 A Yes, sir.

10 Q Would that be Exhibit 399 of the Warren Report?

11 A Yes, sir, it was.

12 Q Now, did you conduct any test or tests in con-  
13 nection with this intact or almost intact  
14 projectile as to what if any gun it had  
15 been fired from?

16 A I did.

17 Q Would you tell us what those tests were and the  
18 results of those tests?

19 A The tests consisted of firing test bullets  
20 from the rifle which I had received and  
21 making microscopic comparisons of the  
22 barrel markings with the markings on the  
23 bullet referred to as 399.

24 This was a comparison microscope  
25 type of examination in which I compared

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these marks which are peculiar to each individual gun and not duplicated in any two rifles. That comparison resulted in identification of the bullet 399 as having been fired in the Italian military 6.5 millimeter rifle which I received for examination.

Q Mr. Frazier, is that a conclusive test, that is, does it prove it was fired from that rifle or a rifle to the exclusion of any other firearms?

A Yes, sir, it does.

Q Did you have occasion to conduct any similar tests on the fragments which you had recovered and which had been turned over to you?

A Yes, I did.

Q Would you kindly describe those tests?

A These tests also were conducted with a comparison microscope and consisted of comparing the microscopic marks left on the test bullets fired from the rifle with the microscopic marks left on the fired jacket portion which was submitted to me and, and the base of the bullet jacket which

1 was also submitted. These two jacket 29  
2 fragments were compared separately with the  
3 test bullets and then compared with each  
4 other.

5 As a result it was determined that  
6 the two bullet jacket fragments, both the  
7 nose portion and the base portion of the  
8 bullets were fired from the 6.5 millimeter  
9 rifle. The examination however did not  
10 prove whether or not these two bullet  
11 fragments actually represented two separ-  
12 ate bullets or whether they were in fact  
13 the nose portion or base portion from a  
14 single bullet.

15 Q Was this a conclusive test?

16 A Yes, Sir.

17 Q As an expert could you testify that they were  
18 fired from the same rifle turned over to  
19 you from the exclusion of all firearms?

20 A Yes, sir.

21 Q Where had you obtained this nose fragment and  
22 base fragment, Mr. Frazier, that is the  
23 two fragments on which you did conduct  
24 the tests on which you formed an opinion?

25 A These two fragments were turned over to me by

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Special Agent Todd of the Washington  
Field Office in Washington on November 22,  
1963.

Q Now in the course of your examination of the  
interior of the Presidential vehicle, did  
you find any pellets or portions of  
projectiles which could be tested so as  
to determine that they came from any other  
gun other than the one from which you con-  
ducted your examination?

A No, sir, there were no such fragments.

Q Now did you have made available to you during  
the course of this examination any empty  
cartridge cases?

A Yes, sir.

Q How many, sir?

A Three.

Q Did you make any tests with these cartridge  
cases in connection with the gun turned  
over to you?

A Yes, sir, I did.

Q Would you please describe these tests and the  
results of them?

A The tests I conducted consisted of firing test  
cartridge cases in the 6.5 millimeter



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Italian military rifle and comparing the firing pin markings left in these fired cartridge cases with the firing pin markings in the three fired 6.5 millimeter cartridge cases which I had received for comparison.

This test also included comparing the marks from the bolt face of the weapon as left on the test cartridge cases and on the three fired cartridge cases.

There was a microscopic examination, that is mounting the two portions, the test on one side of the microscope and the evidence on the other side, and comparing the microscopic marks found in the firing pin impressions and those microscopic markings left by the face of the bolt of the weapon in which they were fired.

As a result of these examinations I concluded that all three of the fired cartridge cases submitted to me for examination had been fired in the 6.5 millimeter Italian military rifle which had been also submitted for comparison.

1 Q Mr. Frazier, is that a conclusive test you  
2 just described?

3 A Yes, it is.

4 Q As a result of having made that test are you  
5 able to testify that those three empty  
6 cartridge cases had been fired from the  
7 rifle submitted to you from the exclusion  
8 of all other firearms?

9 A Yes, sir.

10 Q Did you conduct any firing pin tests?

11 A Only those I just described, the firing pin  
12 impression tests.

13 Q In the course of your reenactment of the  
14 assassination, Mr. Frazier, was there any  
15 indication or marking placed on the floor  
16 of the School Book Depository on the sixth  
17 floor to indicate where the empty  
18 cartridge cases had been found?

19 MR. OSER:

20 I object as there is no testimony about  
21 that and he's merely trying to get it  
22 in front of the Jury.

23 MR. DYMOND:

24 If the Court please, this is a question  
25 pertaining to what happened during

the reenactment of the Presidential  
assassination.

33

THE COURT:

Is that the question?

MR. DYMOND:

That is correct.

THE COURT:

Did he find some cartridges on the date  
of reenactment?

MR. DYMOND:

Your Honor, I haven't asked that question  
yet.

THE COURT:

Go ahead and ask your question.

MR. DYMOND:

Q In the course of your reenactment, and don't  
answer until the Judge has a chance to  
rule, of the Presidential assassination  
scene, were any markings placed on the  
sixth floor of the Texas School Book  
Depository to indicate where empty car-  
tridge cases had been fired?

THE COURT:

Let me understand the question. Your  
question is: During the reenactment

1 -- I would assume they didn't fire 34  
2 live bullets but they fired blanks,  
3 I would assume that --

4 THE WITNESS:

5 That is correct.

6 THE COURT:

7 Your question is: Did the cartridges  
8 fall in a pattern that you would say  
9 they fell in originally?

10 MR. OSER:

11 He wants to know in setting up the re-  
12 enactment scene, were there any  
13 marks placed on the floor of the  
14 School Book Depository where empty  
15 cartridge cases were found?

16 THE COURT:

17 Not found where those fell:

18 MR. OSER:

19 That is my objection as to where they were  
20 found because that is hearsay.

21 THE COURT:

22 Don't get excited about it.

23 MR. OSER:

24 I have a right to object.

25 MR. DYMOND:

1 Mr. Frazier?

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2 A To determine the angle and distance this  
3 fired-cartridge case would be extracted  
4 from this weapon in the process of fir-  
5 ing -- excuse me, after the cartridge  
6 case had been fired.

7 Q I see. Now, what did this test reveal,  
8 Mr. Frazier?

9 A It revealed there was a great deal of variation  
10 in both the distance and the angle to  
11 which the cartridge cases would be ejected  
12 which depended on how much force and how  
13 fast the bolt of the weapon was thrown to  
14 the rear causing the cartridge case to  
15 flip out of the ejection port.

16 Q Generally speaking, you could vary  
17 the distance and the direction by increas-  
18 ing or decreasing the speed at which the  
19 bolt was operated. All of them, however,  
20 when the muzzle of the rifle was held  
21 horizontally were ejected approximately  
22 90 degrees to the right of the weapon.

23 Now, when the muzzle was held  
24 depressed at approximately 45 degrees,  
25 the cartridge cases were ejected

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approximately 80 degrees to the right  
of a line drawn through the muzzle or  
barrel of the weapon.

MR. DYMOND:

If The Court please, we are about to get  
into another area with this witness.

THE COURT:

I then suggest that we stop at this  
moment. It is apparent the State has  
not even started its cross-  
examination and we could not wind up  
with the witness tonight, as it is  
5:28, so I think it would be a good  
time to close the proceedings for  
the day.

You will be excused and will you  
be kind enough to report at 9:00  
o'clock tomorrow morning and con-  
tinue with your testimony.

Gentlemen, again I must instruct  
you and admonish you not to discuss  
the case amongst yourselves or with  
anyone else until it has been  
submitted to you for your decision.

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... At the hour of 5:30 o'clock  
p.m., the Court recessed for the  
day. ...

1 . . . . Pursuant to the adjournment, the pro-  
2 ceedings herein were resumed at 9:00 o'clock  
3 a.m. on Friday, February 21, 1969, appearances  
4 being the same as heretofore noted in the  
5 record . . . .

6 THE COURT:

7 Mr. Frazier, the oath you took yesterday  
8 is still binding. The witness is  
9 still on direct. You may proceed.

10 ROBERT A. FRAZIER,

11 having been sworn and having testified previously,  
12 resumed the stand and was examined and testified as  
13 follows:

14 DIRECT EXAMINATION

15 BY MR. DYMOND:

16 Q Mr. Frazier, was a live round of ammunition  
17 turned over to you in connection with the  
18 rifle that was given to you for examination?

19 A Yes, sir.

20 Q You have testified then an almost intact --

21 MR. OSER:

22 You are starting off with a leading ques-  
23 tion. We object, Your Honor.

24 MR. DYMOND:

25 This is an expert witness and this is merely



1 to correlate and lay a foundation for  
2 another question.

3 THE COURT:

4 Objection overruled.

5 BY MR. DYMOND:

6 Q Mr. Frazier, you have testified that you re-  
7 ceived an almost intact projectile; that  
8 you recovered some fragments from the  
9 Presidential limousine; that some other  
10 fragments were turned over to you and that  
11 there was a lead smear on the interior of  
12 the windshield of the Presidential vehicle.  
13 Was there any similarity in metallic  
14 composition as among the metal found in  
15 these various fragments and the live round  
16 of ammunition turned over to you?

17 A Yes, sir, they all had the same metallic composi-  
18 tion as far as the lead core or lead por-  
19 tions of these objects is concerned.

20 Q Now what would this similarity in metallic  
21 composition indicate?

22 A Only that they may have originated from the  
23 same source. It does not prove it actually  
24 did, but they do have the same composition  
25 and could have originated from the same

1 or similar source.

2 Q Am I correct in saying there is a similarity  
3 in metallic composition or they are identi-  
4 cal?

5 A It was identical as far as the metallic elements  
6 are concerned.

7 Q All right. Now, Mr. Frazier, did you have  
8 occasion to examine the clothing of  
9 President John F. Kennedy?

10 A Yes, sir.

11 Q What items of clothing did you examine, sir?

12 A I examined all that was submitted, the suit  
13 coat, shirt, tie, underwear, the socks,  
14 shoes, and a back support that was included  
15 with the other materials.

16 Q I see. First, taking the coat or jacket worn  
17 by President Kennedy, would you tell us  
18 what you learned upon your examination of  
19 this garment?

20 A I found only one hole in this garment which was  
21 a small hole approximately a quarter of an  
22 inch in diameter. This was located five  
23 and three-eighths inch below the top of the  
24 collar in the back of the coat and one and  
25 three-quarters inches to the right of the

1 mid-line.

2 Q Mr. Frazier, if I were to have Mr. Wegmann  
3 stand before the Jury, could you point  
4 out on his coat approximately where this  
5 hole was?

6 A I think so.

7 THE COURT:

8 I suggest you do it in that area over  
9 there, Mr. Dymond.

10 MR. DYMOND:

11 Step down here, Mr. Frazier.

12 (Witness complies with request of  
13 Counsel, demonstrating to the Jury.)

14 BY MR. DYMOND:

15 Q Thank you, sir. Now, did you make a professional  
16 examination of this hole in the President's  
17 jacket?

18 A Yes, sir, I did.

19 Q Would you describe to the Jury what, if anything,  
20 you observed in connection with these  
21 fibers?

22 A The cloth was torn in very short radial splits  
23 or rips so that a hole approximately a  
24 quarter of an inch in diameter was formed  
25 on the garment. Fibers were pushed inward,

1 that is, both the appearance on the out-  
2 side where the fibers were smooth, whereas  
3 on the inside surface the fibers were  
4 standing out indicating that an object  
5 has passed through from the outside to  
6 the inside.

7 Q Mr. Frazier, as an expert in the field of  
8 ballistics, what would the condition of  
9 these fibers surrounding the hole in the  
10 back of the coat indicate?

11 A This hole and fibers had the appearance of a  
12 bullet entrance hole.

13 Q Now, did you also examine the shirt worn by  
14 President Kennedy?

15 A Yes, sir.

16 Q What, if anything, did you notice in connec-  
17 tion with the examination of that shirt?

18 A I noticed the same situation to exist, that is,  
19 there was a hole in the shirt approximately  
20 five and three-quarter inch below the top  
21 of the collar and about one and one-eighth  
22 inch to the right of the mid-line in the  
23 back of the shirt.

24 Q Did you make an examination of the fibers of the  
25 shirt in the area surrounding this hole?

1 A Yes, sir.

2 Q What did that examination reveal to you?

3 A It showed the fibers to be pressed inward. The  
4 hole was approximately one-quarter inch in  
5 diameter and had very slight radial tears  
6 on the margin of the hole and indicated  
7 in addition, it had all the appearance of  
8 a bullet entrance hole.

9 Q Mr. Frazier, I know you had throat trouble over  
10 the night and would you like to have a drink  
11 of water?

12 A Yes.

13 MR. DYMOND:

14 Your Honor, could we get a glass of water  
15 instead of that cup.

16 THE COURT:

17 Yes.

18 BY MR. DYMOND:

19 Q Now, Mr. Frazier, did you have occasion to --  
20 strike that, please -- in connection with  
21 your examination of the President's shirt,  
22 did you notice anything unusual about the  
23 front portion of the shirt?

24 A Yes, there was a very short slit approximately  
25 one-half inch in length which was located

1 in the button line and also in the button-  
2 hole line, that is where the buttonhole  
3 strip and button strip overlap at the  
4 front. This hole was located just below  
5 the collar button and had no other physical  
6 characteristics so that you could determine  
7 the nature of the object that caused it  
8 except that the object exited at that  
9 point, but I could not determine the  
10 nature of the object.

11 Q What led you, as an expert, to believe that the  
12 object exited there?

13 A From again the shape of the fibers being  
14 pressed from the inside of the shirt out-  
15 ward.

16 Q Now, did you make a comparison between the hole  
17 in the back of the shirt and the hole in  
18 the back of the coat, and, if so, did the  
19 two holes coincide in position?

20 A Yes, they did.

21 Q Was there any difference in alignment at all?

22 A No. There could have been a slight difference  
23 in alignment because the hole in the coat  
24 was approximately three-eighths of an inch  
25 higher, that is, it was only five and

1 three-eighths inches below the collar,  
 2 whereas the hole in the shirt was five  
 3 and three-quarters inches down, but since  
 4 the collar cloth of a shirt stands up above  
 5 the coat, I would judge they were corres-  
 6 ponding holes.

7 Q Doctor, did you have occasion to examine the  
 8 neck tie worn --

9 MR. OSER:

10 He is not a doctor.

11 BY MR. DYMOND:

12 Q Did you have occasion to examine the neck tie  
 13 worn by the President, Mr. Frazier?

14 A I did.

15 Q Would you tell us what, if anything, was revealed  
 16 by your examination of this neck tie.

17 A The neck tie had been cut, that is, the neck  
 18 band was cut to remove it --

19 MR. OSER:

20 I object, unless he cut it himself.

21 THE COURT:

22 When he received it it appeared to be cut,  
 23 Mr. Oser.

24 THE WITNESS:

25 Besides these marks that indicated it had





1 I could not substantiate this from techni-  
2 cal knowledge, and, therefore, it is only  
3 a possibility.

4 Q Did you determine any possibility or probability  
5 of its having been caused by more than one  
6 projectile having been fired in the back?

7 A There was only one fired into the back that  
8 struck the coat and the shirt. I could  
9 not say whether the same object came out  
10 the front because this was a slit. I  
11 might say that the strength of the material  
12 in this shirt is such that you would  
13 normally get a slit vertical rather than  
14 horizontal in this area.

15 Q Did this slit produce any characteristics that  
16 it had not been made by the exiting of a  
17 projectile?

18 A No, sir.

19 Q Now, as an expert, from what direction would  
20 you say that the bullet which entered the  
21 President's back came?

22 A It came from the rear. As far as the angle of  
23 the direction, this would depend on the  
24 position of the President's body at the  
25 time he was shot, and I have no knowledge

1 of that specific angle, however, the hole  
2 in the back was considerably higher than  
3 the hole in the front, I would say 20 to  
4 30 degree downward angle.

5 Q Mr. Frazier, could you demonstrate to the  
6 Jury why you say that the position of the  
7 body of the President would have a bearing  
8 upon the bearing of the entrance of this  
9 bullet?

10 A Normally, angles of entrance are stated with  
11 reference to the ground or horizontal  
12 plane. Whereas a person's body is free  
13 to move with reference to that plane, and  
14 any movement forward or back in the  
15 fashion of bending over, dipping to the  
16 right or left, would affect the angle with  
17 reference to the ground and would not, of  
18 course, affect the angle with reference to  
19 the axis of the individual.

20 Q From your observation of the Zapruder film,  
21 were you able to determine the exact time  
22 the president was hit in the back?

23 A Not in the coat, no, only in the head.

24 Q Only in the head?

25 A Yes, sir.

1 Q Would that be the reason for not being able  
2 to determine the exact position of his  
3 body when he was hit in the back?

4 A Yes, sir.

5 Q Mr. Frazier, did you have occasion to examine  
6 the coat of Governor Connally?

7 A I did.

8 Q Would you tell us what, if anything, you found  
9 as a result of this examination?

10 A I found two holes in the coat, one of which was  
11 located in the back near the seam where  
12 the right sleeve attaches to the coat and  
13 the other was located in the front of the  
14 coat in the right chest area. This coat  
15 had been cleaned and pressed when I ex-  
16 amined it and I could arrive at no con-  
17 clusions concerning whether or not these  
18 holes were bullet holes and if so the  
19 direction of travel.

20 Q The coat had been cleaned and pressed before  
21 you examined it?

22 A Yes, sir.

23 Q With respect to the position of these holes,  
24 that is the location of these holes and  
25 the area or position in the car where the

1 stand-in for Governor Connally was sitting  
2 during the reenactment, as an expert, did  
3 you find anything inconsistent with the  
4 possibility that the same bullet which  
5 went through President Kennedy also  
6 penetrated Governor Connally?

7 MR. OSER:

8 I am going to object to this question,  
9 to anything this witness might testi-  
10 fy to because it necessarily would be  
11 as a result of hearsay because this  
12 witness testified the purposes of the  
13 reenactment was to find out what  
14 could have happened as a result of  
15 what the Warren Commission told him  
16 as to what the witnesses testified  
17 to before the Warren Commission and,  
18 therefore, it is based on hearsay.

19 MR. DYMOND:

20 If the Court please, this witness has  
21 testified he has seen the Zapruder  
22 film. If he has seen the Zapruder  
23 film, certainly he knows the relative  
24 position in the automobile of Governor  
25 Connally and President Kennedy.

1 Experts have been able to testify  
2 throughout this trial on positioning  
3 in that Zapruder film and that is the  
4 only question we are interested in  
5 here.

6 MR. OSER:

7 Will Your Honor hear the State once more?

8 THE COURT:

9 Yes.

10 MR. OSER:

11 This witness already testified he has no  
12 technical knowledge in this area and  
13 we don't know how much of the Zapruder  
14 he had seen, but certainly he is not  
15 a photographic expert and everything  
16 he is testifying to here is based on  
17 hearsay because he said the Warren  
18 Commission told him what they testi-  
19 fied to, and that is obviously is  
20 hearsay.

21 THE COURT:

22 I overrule the objection.

23 MR. DYMOND:

24 Do you understand the question?

25 THE WITNESS:

1 I would like to have it repeated.

2 BY MR. DYMOND:

3 Q Based upon your knowledge -- Mister, would you  
4 please read the question back?

5 (Whereupon, the question was read  
6 back by the Reporter.)

7 THE WITNESS:

8 No, sir.

9 BY MR. DYMOND:

10 Q Mr. Frazier, --

11 THE COURT:

12 It's such a long question and such a  
13 short answer, I think you better re-  
14 peat the question. The witness  
15 understood the question, but --

16 BY MR. DYMOND:

17 Q Now, as an expert, what were your reasons for  
18 arriving at that conclusion?

19 MR. OSER:

20 I am going to object to this as this is  
21 again based on hearsay.

22 THE COURT:

23 I overrule your objection.

24 THE WITNESS:

25 Based on my examination of the Presidential

1 limousine and the location of the  
2 individuals in it as shown in the  
3 film, the Governor's body or person  
4 was located nearer the center of the  
5 car than the President. The President  
6 was sitting out actually with his  
7 arm on the side rail of the car as  
8 shown in the film. The Governor was  
9 spaced inward several inches from the  
10 door. Therefore, the angle at which  
11 a bullet fired from above and to the  
12 right would strike the President,  
13 pass through his body, was such that  
14 it could have also entered the Gover-  
15 nor's body at the place where there was  
16 a hole located in his coat.

17 BY MR. DYMOND:

18 Q Mr. Frazier, did you also have occasion to  
19 examine the shirt of Governor Connally?

20 A Yes, sir.

21 Q Would you tell us what you found as a result of  
22 this examination?

23 A I found a hole located in the back of the shirt,  
24 which is a slightly elongated hole, that  
25 is, not a regular round hole, generally

1                    corresponding in the area to the hole in  
2                    the back of his coat. In the front of  
3                    this shirt there was an irregular tear in  
4                    the material, being an egg-shaped hole  
5                    very irregular in nature.

6                    Q    Had this garment been laundered before you had  
7                    an opportunity to examine it?

8                    A    Yes.

9                    Q    Were you able to determine anything from the  
10                   fibers of that garment if you made such  
11                   an examination?

12                   A    No, sir.

13                   Q    Mr. Frazier, does laundering or drycleaning  
14                   essentially remove the characteristics  
15                   from which a ballistic expert can deter-  
16                   mine from the fibers of materials a point  
17                   of entrance or exit?

18                   A    Yes, sir.

19                   Q    Did you have occasion to examine the sleeves  
20                   of the coat and the shirt of Governor  
21                   Connally?

22                   A    Yes, sir, I did.

23                   Q    Did you learn anything unusual as a result of  
24                   this examination?

25                   A    On the sleeve of the coat I found a hole irregu-



1 lar in shape in the top position of the  
2 right sleeve near the inside or edge of  
3 the sleeve penetrating both the outside  
4 layer, the lining, and the inside layer  
5 of the sleeve, and a similar damage was  
6 present in the cuffs of the Governor's  
7 shirt, which, as I recall, was French  
8 cuffs that had four layers of material,  
9 and all four layers were torn by the  
10 passage of some projectile. I could make  
11 no conclusions as to whether or not this  
12 damage was caused by a bullet or some  
13 other object.

14 Q Based upon your studies of the Zapruder film  
15 and your studies of the relative positions  
16 of the occupants of the Presidential  
17 limousine, did you find anything incon-  
18 sistent with the holes in the cuffs of  
19 Governor Connally's coat and shirt having  
20 been made by one and the same projectile  
21 which penetrated his body?

22 A No, sir.

23 Q However, I take it, you cannot testify this is  
24 a fact because of not being able to deter-  
25 mine the entrance and exit points because of

- 1 the laundering of the materials?
- 2 A That is correct, yes.
- 3 Q Did you have occasion to examine the trousers  
4 of Governor Connally?
- 5 A Yes, I did.
- 6 Q What, if anything, did you determine by that  
7 examination?
- 8 A I found in the trousers at the left knee area  
9 a hole which is roughly circular in shape  
10 approximately one-quarter inch in diameter.  
11 There was a slight elongation, possibly  
12 due to tearing of the cloth and this  
13 particular hole did not have any  
14 characteristics which would permit to de-  
15 termine whether or not it was caused by  
16 the passage of a bullet, and, if so,  
17 whether it was an entrance or exit hole.
- 18 Q Had this garment also been laundered or dry-  
19 cleaned before you examined it?
- 20 A Yes, sir.
- 21 Q Based upon your study and knowledge of the  
22 relative positioning of the occupants of  
23 this limousine, Mr. Frazier, and with  
24 particular reference to the hole in the  
25 trousers of Governor Connally, if this

1 wound or this hole had been inflicted by  
2 a gun fired from in front of the automobile  
3 would it or would it not have had to pene-  
4 trate the windshield of the automobile?

5 A It would have had to either penetrate the wind-  
6 shield or metal portion of the car, and  
7 in addition the back of the front seat of  
8 the car.

9 Q Did you find any evidence of such penetration?

10 A No, sir, there was none.

11 Q Now, Mr. Frazier, the -- with reference to the  
12 rifle which was examined by you, and the  
13 live ammunition that was turned over to  
14 you, that is, one round of live ammunition,  
15 could you tell me, as an expert, what  
16 would be the approximate speed of the pro-  
17 jectile of that live round of ammunition  
18 if fired from the rifle you examined?

19 A The velocity at the muzzle would be in the  
20 neighborhood of 1,965 feet per second.  
21 This velocity can vary as much as 50 feet  
22 per second, I would say closer to 40 feet  
23 per second, in either direction from this  
24 average. However, I tested ammunition  
25 similar to this, made by the same company,

1 and it did average 1,965 feet per second  
2 at the muzzle.

3 Q Now, to what extent would this speed diminish  
4 over a distance, say, of 265 feet?

5 A A rule-of-thumb estimate would give you a de-  
6 crease in velocity of 265, that is, it  
7 reduces approximately one foot per second  
8 in velocity for each foot travelled.

9 Q So that at the end of 265 feet, it would be  
10 going approximately how fast?

11 A The actual figures which I have calculated on  
12 that I do not have with me, but generally  
13 speaking it would be travelling 1,800  
14 feet per second.

15 Q How would that compare with the speed of sound?

16 A Above the neighborhood of sound which is in  
17 the neighborhood of 1,100 feet per second.

18 Q Are there any particular acoustical characteris-  
19 tics of a high velocity bullet, that is,  
20 one that travels faster than the speed of  
21 sound?

22 A Yes, sir.

23 MR. OSER:

24 I am going to object unless he can testify  
25 to what area Mr. Dymond is talking

1 about because in different areas  
2 there are different indications.

3 MR. DYMOND:

4 If the Court please, this witness is sub-  
5 ject to cross-examination.

6 THE COURT:

7 What was your question?

8 MR. DYMOND:

9 I wanted to know whether there are any  
10 particular acoustical characteristics  
11 of a high-speed projectile that  
12 travels faster than sound, and, if so,  
13 what they are.

14 THE COURT:

15 I will permit it.

16 MR. DYMOND:

17 He has been qualified as an expert in  
18 ballistics.

19 THE COURT:

20 I overruled it, Mr. Dymond.

21 A Yes, sir. These characteristics are that when  
22 a person is standing in front, in the  
23 general area in front of a firearm which  
24 fires a bullet faster than the speed of  
25 sound, that they will hear the report, or

1 a sound wave, a sonic boom from the bullet  
2 itself prior to the time they will hear  
3 the report since the bullet creates a  
4 sonic boom which reaches the ear of the  
5 person before the explosion of the gun  
6 powder and muzzle blast reaches them. The  
7 speed of sound travels at about 1,100  
8 feet per second, so it would require one  
9 second to travel 1,100 feet, whereas a  
10 person standing at 1,100 feet would hear  
11 the report of the bullet as it went over  
12 and one second or a fraction of a second  
13 later they would hear the sound of the re-  
14 port of the weapon.

15 BY MR. DYMOND:

16 Q Would you liken this to the sonic boom made by  
17 a jet plane travelling faster than sound?

18 MR. OSER:

19 I object, as he is not an aeronautical  
20 engineer, he is a ballistics expert.

21 THE COURT:

22 The objection is overruled.

23 THE WITNESS:

24 It is the same process in physics in that  
25 you hear a sonic report from the ob-

1                   ject travelling faster than the  
2                   speed of sound.

3 BY MR. DYMOND:

4 Q     Mr. Frazier, as an expert, would you say that  
5           this sonic noise is easily distinguishable  
6           from the noise made by the explosion of  
7           the cartridge or can they be confused?

8 A     They are very easily confused unless you are  
9           particularly listening for it at the  
10          time and you are in addition familiar  
11          with what they sound like and have heard  
12          it repeatedly before.

13 Q     Mr. Frazier, you have testified that you found  
14          damage to the interior of the windshield  
15          of the Presidential vehicle, is that cor-  
16          rect, sir?

17 A     Yes, sir, no, the damage was to the exterior  
18          as there was a lead smear on the interior.

19 Q     As I understand, you examined this area of  
20          damage.

21 A     Yes, sir.

22 Q     And you concluded that this damaged area had  
23          been caused by what, sir?

24 A     By a lead projectile striking the windshield  
25          on the inside surface.

1 Q Now, is there any explanation as to why a  
2 lead projectile from a Mannlicher-Carcano

3 MR. OSER:

4 There is no testimony that this piece of  
5 lead came from a 6.5 millimeter  
6 Mannlicher-Carcano.

7 THE COURT:

8 The objection is well taken. I don't be-  
9 lieve the expert can tell you where  
10 the lead came from.

11 MR. DYMOND:

12 If the Court please, let me examine him  
13 on that right now.

14 THE COURT:

15 O.K.

16 BY MR. DYMOND:

17 Q How many fragments did you find in the auto-  
18 mobile, Mr. Frazier?

19 A I found three lead fragments.

20 Q Three lead fragments. Did you perform any tests  
21 on these lead fragments for the purpose of  
22 determining what gun these had come from?

23 A No, sir, these lead fragments do not possess  
24 any barrel markings and it would not be  
25 possible to determine that.



1 THE COURT:

2 May I interrupt you a second. I remember  
3 his testimony about the lead fragments  
4 to the extent that he said they were  
5 similar in composition to what was  
6 found under the drop seat, but at no  
7 time did he say where they came from.

8 BY MR. DYMOND:

9 Q Let me give you a hypothetical question on  
10 this:

11 If a Mannlicher-Carcano 6.5 millimeter rifle  
12 were fired from a distance of 265 feet,  
13 would it ordinarily penetrate an automobile  
14 windshield?

15 A Yes, it would.

16 MR. OSER:

17 I am going to object to the hypothetical  
18 question by Defense Counsel because  
19 the hypothetical question contains  
20 facts that have not been testified to.  
21 He said, "If a Mannlicher-Carcano  
22 rifle had been fired from 265 feet,"  
23 and there was no testimony to that  
24 effect.

25 MR. DYMOND:

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I asked a hypothetical question.

MR. OSER:

A hypothetical question must contain facts brought out during the trial and these facts have not been proven.

THE COURT:

I will permit the question.

MR. DYMOND:

Would you read the question, please, Mr. Neyrey?

(Whereupon, the question was read back by the Reporter.)

THE WITNESS:

Yes, it would.

BY MR. DYMOND:

Q If upon hitting such a windshield it would not penetrate that windshield, what, if any, explanation could you give as a reason for that?

A The velocity of the projectile had dropped very drastically to the point that it would not even break the glass on the inside surface. Some object, it must have passed through some object, ricocheted through some object or in some other way

*Now much did  
the fragment weigh*



1 rifle have upon the ease or difficulty of  
2 that shot?

3 A The effect of the telescopic sight would be to  
4 cut the distance by three-quarters, that  
5 is, the effective target size would be the  
6 same as if you were shooting at one-fourth  
7 that distance, a little over 80 feet,  
8 therefore making it easier to line up the  
9 cross hairs of the telescopic sight on  
10 the target because in addition with this  
11 rifle it is only necessary to pull the  
12 trigger while the cross hairs are lined  
13 up on the target and you do not have to  
14 bring them together, you don't have to  
15 line up two separate sights but only the  
16 cross hairs on the target and therefore,  
17 in my opinion, it would be a relatively  
18 easy shot, slightly complicated, however,  
19 if the target were moving at the time, it  
20 would make it a little more difficult.

21 Q During the course of your entire examination,  
22 Mr. Frazier, as an expert, did you find  
23 anything inconsistent with all the shots  
24 having been fired from the right rear of  
25 the Presidential vehicle and from the sixth

1 floor Depository window?

2 MR. OSER:

3 Your Honor, I am going to object because  
4 this man is not qualified in the  
5 field of photography or as a photo-  
6 graphic expert and the testimony would  
7 be the result of a photograph expert  
8 which he is not qualified to express.

9 THE COURT:

10 The objection is overruled.

11 A No, sir, there was nothing inconsistent that  
12 I found to preclude or indicate that the  
13 shots came from anywhere except above and  
14 beyond.

15 THE COURT:

16 Mr. Frazier, what you are testifying to,  
17 wouldn't the shooter, whomever would  
18 have the gun, say when shooting ducks,  
19 don't you have to lead with the cross  
20 hairs if a vehicle were moving at  
21 12 miles an hour?

22 THE WITNESS:

23 Yes, sir, he would have to lead a vehicle  
24 moving at 12 miles an hour and to  
25 shoot approximately six inches over

1 his target so that by the time the  
2 bullet reached the target it and the  
3 vehicle would be at the same place.

4 THE COURT:

5 Wouldn't he have to be proficient in  
6 shooting firearms in knowing how much  
7 to lead?

8 THE WITNESS:

9 In my opinion, 12 miles an hour wouldn't  
10 require too much proficiency in esti-  
11 mating lead. I think, and in fact I  
12 would have taken very little considera-  
13 tion in my own position.

14 BY MR. DYMOND:

15 Q While on that subject, Mr. Frazier, from the  
16 sixth floor Depository window, with the  
17 reenactment vehicle moving along Elm Street,  
18 as the Presidential vehicle was shown in  
19 the Zapruder film, was this 12 miles an  
20 hour movement laterally or partially going  
21 away from the sixth floor?

22 A It was largely going away from the window.

23 Q Would that make it an easier or more difficult  
24 shot than had it been completely lateral  
25 movement?

1 A It would make it considerably easier, it would 70

2 have cut the lead from two feet from a  
3 lateral target to approximately six inches.

4 Q From all of the evidence you have viewed, Mr.  
5 Frazier, and everything you have examined,  
6 did you find any evidence within your  
7 field that would indicate that the shots  
8 at the Presidential vehicle came from any  
9 place other than the sixth floor window of  
10 the Texas School Book Depository?

11 A No, sir.

12 MR. DYMOND:

13 We tender the witness.

14

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16

NO HIATUS HERE.

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1  
2 THE COURT:

3 Is the State ready?

4 MR. OSER:

5 We are ready, Your Honor.

6 THE COURT:

7 Is the Defense ready?

8 MR. DYMOND:

9 The Defense is ready, Your Honor.

10 THE COURT:

11 You may proceed.

12 CROSS-EXAMINATION

13 BY MR. OSER:

14 Q How long have you been an F.B.I. Agent?

15 A Approximately 26 years.

16 Q Approximately how many scenes of crimes have  
17 you investigated for the F.B.I. during  
18 that period?

19 A Very few. Three or four.

20 Q Have you assisted State authorities in inves-  
21 tigating scenes of crimes?

22 A No, sir.

23 Q At the time you investigated the assassination  
24 of President John F. Kennedy, can you  
25 tell us whether or not that was a Federal



1 offense. the killing of a president at  
2 that time?

3 MR. DYMOND:

4 We object. We don't see the relevancy  
5 of this at all.

6 THE COURT:

7 What is the objection?

8 MR. DYMOND:

9 We object on the grounds of relevancy.

10 THE COURT:

11 Everyone knows it was a State offense  
12 and it is now a Federal offense.  
13 That is a matter of law.

14 MR. OSER:

15 I'm trying to ascertain how the evidence  
16 got out of the State of Texas where  
17 the offense occurred and into  
18 Washington.

19 THE COURT:

20 You may proceed.

21 BY MR. OSER:

22 Q Can you tell me what State official of Texas  
23 ordered the removal of the evidence from  
24 the scene of this homicide to Washington,  
25 if you know?

1 MR. DYMOND:

2 That is quite irrelevant, and we object.

3 THE COURT:

4 What is the relevancy of this with  
5 respect to an expert on ballistics?

6 MR. ALCOCK:

7 There is the matter of the chain of  
8 evidence, and it would be --

9 MR. DYMOND:

10 It has nothing to do with ballistics, and  
11 this witness is an expert on  
12 ballistics.

13 MR. ALCOCK:

14 Certainly it does. Whose hands did it  
15 pass through? Certainly the element  
16 of the chain of evidence is important  
17 in that area. The State has the  
18 right to examine the evidence of  
19 chain since Mr. Dymond has asked the  
20 witness about material and objects  
21 that were in Dallas on the 22nd of  
22 November, and on which he performed  
23 tests later on in Washington, D.C.

24 MR. DYMOND:

25 I think if the State wants to come out and

1 charge the Federal Government with  
2 fraud they ought to say so. I don't  
3 think this has any relevancy at all  
4 to the testimony of a ballistics  
5 expert who is testifying as to the  
6 results of certain tests performed  
7 by him.

8 THE COURT:

9 My ruling yesterday with respect to  
10 Mr. Frazier's testimony was that I  
11 did not permit him to testify that  
12 what was given to him was the gun  
13 but that he made tests on a gun.  
14 Do you recall that was my ruling  
15 yesterday?

16 MR. ALCOCK:

17 I also recall he was able to testify as  
18 to the ownership of the coats and  
19 shirts as being the coat and shirt  
20 of President Kennedy and the  
21 presidential limousine.

22 MR. DYMOND:

23 First of all there was no objection by  
24 the State to that. It is in the  
25 record. If a foundation had to be

1                   laid perhaps we could have laid it  
2                   and perhaps we could not. However,  
3                   that was the time to object to it.

4           THE COURT:

5                   I sustained the objection.

6   BY MR. OSER:

7   Q    Do you know when the President's limousine  
8           got called back to Washington, D.C.?

9   A    No, not definitely.

10   Q   When did you first see the car?

11   A    Approximately 1:40 a.m. on November 23, 1963.

12   Q    Can you tell us whether or not the Presidential  
13           limousine, while it was at Parkland  
14           Hospital, was under guard the entire time?

15   A    I don't know.

16   Q    In your part of the investigation, Mr. Frazier,  
17           did you have at your disposal the various  
18           reports of the F.B.I. regarding the  
19           assassination? Did you consider all the  
20           evidence?

21   A    No, sir.

22   Q    Did you attempt to get all the F.B.I. reports  
23           involving what may or may not have  
24           happened after the particular time or what  
25           may or may not have happened at Parkland

1 Hospital, and what may or may not have  
2 happened in regard to various pieces of  
3 evidence that were found in Dealey Plaza?

4 THE COURT:

5 You have asked about five questions in  
6 one. Break it down, Mr. Oser.

7 BY MR. OSER:

8 Q Did you make an attempt to obtain any F.B.I.  
9 reports regarding the Presidential  
10 limousine while it was in Dallas, Texas,  
11 on November 22, 1963?

12 MR. DYMOND:

13 Objection. Our objection is that it has  
14 not been established yet that any  
15 such reports were then in existence.  
16 I think before he asks this witness  
17 whether he attempted to get reports  
18 it should be first determined whether  
19 there were any reports in existence  
20 at that time, which I doubt, the day  
21 after the assassination.

22 THE COURT:

23 Mr. Oser, your question assumes there  
24 were reports. Can you preface your  
25 question by asking Mr. Frazier

1                   whether there were any reports? 77

2           MR. OSER:

3                   I asked him if he attempted to obtain any  
4                   of these reports, if there were any.

5           MR. DYMOND:

6                   That was not the question. We do not  
7                   object to the question in that form.

8           BY MR. OSER:

9           Q       Did you attempt to obtain any F.B.I. reports  
10                   regarding the Presidential limousine  
11                   while it was in Dallas, Texas on November  
12                   22, 1963?

13          MR. DYMOND:

14                   Objection, that is not the question which  
15                   Mr. Oser said he would ask.

16          THE COURT:

17                   Will you rephrase your question.

18          BY MR. OSER:

19          Q       Did you attempt to obtain any F.B.I. reports  
20                   which may have been written at the time  
21                   you conducted your investigation in regard  
22                   to the Presidential limousine in Dallas,  
23                   Texas, on November 22, 1963?

24          A       No, I did not.

25          Q       Are you familiar with the -- with a supplemental

1 F.B.I. report filed on January 13, 1964, 78  
2 regarding the Presidential limousine and  
3 disclosing there was a dented area in the

4 MR. DYMOND:

5 We object to Counsel stating what an  
6 F.B.I. report discloses. This amounts  
7 to Counsel testifying.

8 THE COURT:

9 If it is a prior contradictory statement I  
10 will permit it. You cannot read  
11 from a report.

12 MR. OSER:

13 The witness is under cross-examination.  
14 He has testified about this complete  
15 and exhaustive examination he did,  
16 and I want to know if he found a  
17 dent in the chrome above the wind-  
18 shield.

19 THE COURT:

20 Ask him that instead of reading the  
21 report.

22 BY MR. OSER:

23 Q You examined the car, didn't you, Mr. Frazier,  
24 the President's car?

25 A Yes, I did.

1 Q Did you find any dent in the chrome area above  
2 the windshield?

3 A Yes, there was.

4 Q You didn't refer to this on Direct Examination,  
5 you referred to the windshield.

6 A Only indirectly, when he asked me if I found  
7 any other bullet impact areas and I said  
8 that I found none that I could identify as  
9 such.

10 Q You don't know whether any other members of the  
11 F.B.I. Ballistics Department made a deter-  
12 mination about this area that it would  
13 have been caused by bullet fragments, do  
14 you?

15 A I was aware of the F.B.I. firearm and ballistic  
16 examinations.

17 Q Were you familiar with such a report of  
18 January 13, 1964?

19 MR. DYMOND:

20 If he has the report I ask that it be  
21 submitted to Mr. Frazier.

22 THE COURT:

23 He has stated that he was familiar with  
24 all the reports, as I understand it.

25 MR. DYMOND:



1 He's being asked now whether he was  
2 familiar with the report of a cer-  
3 tain date, which I think is an  
4 unfair question. If Counsel has a  
5 report I ask it be shown to the  
6 witness and he be asked if he is  
7 familiar with it.

8 THE COURT:

9 I cannot tell the State how to run their  
10 case, nor can I tell you how to run  
11 yours, Mr. Dymond. You may proceed,  
12 Mr. Oser. Ask him if he is familiar  
13 with the report.

14 BY MR. OSER:

15 Q Are you familiar with the report I am speaking  
16 about?

17 A I don't recall any reports by date.

18 Q Were you the only ballistics expert from the  
19 F.B.I. involved in the investigation of  
20 President Kennedy's death?

21 A No, sir, there were two others.

22 Q Who were they?

23 A Courtland Cunningham and Charles Killian.

24 Q In examining the car did you have occasion to  
25 take the measurements of the jump seats

1 and the rear seat area of the President's  
2 car?

3 A I don't recall that I did.

4 Q You are not able to state how far in front of  
5 the rear seat were the jump seats in the  
6 President's car?

7 A I don't recall taking that measurement or  
8 testifying concerning it.

9 Q I believe you testified, Mr. Frazier, the  
10 Presidential limousine was not used in  
11 the reconstruction, is that correct?

12 A Yes, sir.

13 Q Why?

14 A I don't know why of my own knowledge. I under-  
15 stand it was being reconstructed and  
16 refurbished inside.

17 Q You all didn't perform a reconstruction until  
18 May 24, 1964, is that correct?

19 A Yes, sir, that is correct.

20 Q Which is some five or six months after the date  
21 of the shooting, is that right?

22 A Yes, sir.

23 Q Can you tell me which car did you all use for  
24 the reconstruction?

25 A We used a Cadillac limousine.

1 Q Can you tell me whether or not the measurements  
2 of the Cadillac limousine corresponded to  
3 the Presidential limousine in regard to  
4 the jump seats and the rear seat?

5 A It is my impression they did not correspond  
6 exactly to the measurements either in  
7 height -- well, I don't know about the  
8 lateral displacement.

9 Q As an expert in the field of ballistics, can  
10 you tell me why you didn't call for the  
11 Presidential limousine to be used in your  
12 reconstruction which would have been the  
13 best piece of evidence to be used at that  
14 time?

15 MR. DYMOND:

16 I object to Counsel passing upon the  
17 quality of evidence.

18 THE COURT:

19 He doesn't know why the original car  
20 wasn't used.

21  
22  
23 NO HIATUS HERE.  
24  
25

1 MR. OSER:

2 I am asking why he didn't call for the  
3 original car to be brought to Dallas,  
4 Texas, for the May 24, 1964 reconstruc-  
5 tion.

6 MR. DYMOND:

7 I object to Counsel labelling that car as  
8 the best evidence.

9 MR. OSER:

10 I will ask him why he didn't call for the  
11 limousine the President was in at  
12 the time he was shot to be brought to  
13 Dallas on May 24, 1964 for his re-  
14 construction.

15 THE COURT:

16 Did you have authority to make such a  
17 request, Mr. Frazier?

18 THE WITNESS:

19 No, sir.

20 THE COURT:

21 Let us go to another subject.

22 BY MR. OSER:

23 Q For anything that you may have needed in your  
24 reconstruction you had to go to someone  
25 higher up to get permission to use it, is

1                   that so?

2       A       No, sir, that is not quite right. This recon-  
3                   struction was handled in its entirety by  
4                   members of the President's Commission  
5                   investigating the assassination of Presi-  
6                   dent Kennedy. All facts, details, and the  
7                   entire reconstruction was in their care  
8                   and they handled it the way they specified  
9                   and desired. I was there merely as a con-  
10                  sultant to the President's Commission.

11       Q       You were merely carrying out the directions of  
12                   what the Warren Commission wanted and you  
13                   conducted your tests according to that, is  
14                   that what you are saying?

15       A       Generally speaking, yes.

16       Q       During your reconstruction, Mr. Frazier, can  
17                   you tell us whether or not you had availa-  
18                   ble to you, and did you use, any FBI re-  
19                   ports of an interview with Mr. and Mrs.  
20                   William Newman?

21       A       I don't recall any reports I saw. Are you  
22                   speaking of Field Office reports or  
23                   Laboratory reports?

24       Q       I am speaking of any reports containing an  
25                   interview with Mr. and Mrs. Newman.

1 THE COURT:

2 He told you he didn't recall any reports  
3 he saw. If he didn't recall any,  
4 then he didn't recall that particular  
5 one, obviously.

6 BY MR. OSER:

7 Q Did you see at any time any statements made by  
8 any of the witnesses in Dealey Plaza on  
9 November 22, 1963?

10 A Are you speaking of any reports or did I talk  
11 to any witnesses?

12 Q First I am asking you if you saw any statements  
13 alleged to have been made by any of the  
14 witnesses in Dealey Plaza on November 22,  
15 1963?

16 A I don't recall.

17 Q I believe you testified the people that were  
18 used in the reconstruction were placed in  
19 their relative positions by the Warren  
20 Commission, is that correct?

21 A Yes, sir, according to the Zapruder film and  
22 other films.

23 Q Did you place them?

24 A No, but I was present at that reconstruction.

25 Q You were in the sixth floor window, were you

1 not, of the Texas School Depository Build- 86  
2 ing?

3 A During the time the reconstruction was run I  
4 was in that window. However, I was at  
5 other places at other times.

6 Q How much of the Zapruder film did you see?

7 A All of it.

8 Q What type of examination did you make of the  
9 Zapruder film?

10 A I made three examinations of it. I saw the  
11 film run several times at normal speed  
12 through a normal projector. I then ex-  
13 amined the film generally, that is, I  
14 looked at each frame in the film, frame  
15 by frame. Then I examined enlargements  
16 which had been made of this film of each  
17 frame of the film. In that regard I con-  
18 centrated mostly on particular frames which  
19 had been selected by the President's Com-  
20 mission.

21 Q Am I correct in stating you did testify in  
22 front of the Warren Commission?

23 A Yes, sir.

24 Q Do you recall testifying in front of the Warren  
25 Commission and making a statement to them,

1 "I have not made a very thorough study of  
2 the Zapruder film"?

3 A That's right, I didn't consider my study of the  
4 Zapruder film a thorough study.

5 Q You said you had occasion to measure President  
6 Kennedy's coat and his shirt, is that  
7 right, sir?

8 A No, sir, I did not make any measurement of his  
9 coat or shirt. I made a measurement of a  
10 hole appearing in the back of these items  
11 and a hole appearing in the front of the  
12 shirt.

13 MR. OSER:

14 May I show this to Defense Counsel on the  
15 other side of the bar?

16 THE COURT:

17 Yes.

18 MR. OSER:

19 Your Honor, at this time the State wishes  
20 to display to the witness exhibits  
21 that are fairly large.

22 THE COURT:

23 I can't hear.

24 MR. OSER:

25 The State wishes to display to the witness



1 certain exhibits that are fairly  
2 large at this particular time.

3 MR. WILLIAM WEGMANN:

4 To which we object. I think the Jury  
5 should be excused during this argu-  
6 ment.

7 THE COURT:

8 Sheriff, would you mind taking the Jury  
9 out.

10 (Whereupon, at this time the Jury  
11 was taken out of the courtroom.)

12 THE COURT:

13 What is it you have there, Mr. Oser?

14 MR. OSER:

15 I show the witness what the State marks  
16 as "S-61," and ask him if he would  
17 view this exhibit.

18 BY MR. OSER:

19 Q I ask you whether or not you are familiar with  
20 what is depicted in that exhibit.

21 MR. WILLIAM WEGMANN:

22 To which we object on the grounds that this  
23 is a picture of a picture, as I under-  
24 stand it, and Mr. Oser can correct me  
25 if I am wrong, it is a picture of a

1 picture out of the Warren Commission  
2 section on exhibits. If you are  
3 going to put part of the Warren  
4 Commission in, we ought to put it  
5 all in. We cannot pick out a picture  
6 here and a picture there and claim it  
7 is admissible. This is a picture  
8 for which no foundation has been laid  
9 other than the fact the witness may  
10 be familiar with the coat which is --

11 THE COURT:

12 If the witness can identify the picture  
13 I will permit him to be examined on  
14 the photograph. I will permit the  
15 question. I am not letting the  
16 Warren Commission Report come in in  
17 any way.

18 BY MR. OSER:

19 Q Are you familiar, or can you recognize what is  
20 depicted in this exhibit?

21 MR. WILLIAM WEGMANN:

22 You have to trace the history of the  
23 picture. You cannot merely ask him  
24 if he recognizes --

25 THE COURT:

1 All I want to know is if the witness can  
2 recognize it. If he can, he can be  
3 examined on it.

4 MR. WILLIAM WEGMANN:

5 I think the witness should be instructed  
6 he has to recognize the contents of  
7 the picture and not the exhibit num-  
8 ber which is shown on the bottom of  
9 the picture.

10 THE COURT:

11 Do you recognize the picture without know-  
12 ing what exhibit number it may or may  
13 not be?

14 THE WITNESS:

15 No, sir, I do not. I could not recognize  
16 the objects shown, nor have I seen  
17 this exhibit before. As to whether it  
18 portrays something I saw before, it  
19 is beyond my knowledge at this time.  
20 I wouldn't say this is an accurate  
21 reproduction of any photograph I ever  
22 saw.

23 THE COURT:

24 When you were making your ballistic tests  
25 on the coat which you have described

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as President Kennedy's coat and  
Governor Connally's coat, from that  
photograph would you say that is  
similar? Does that photograph repre-  
sent a similar coat to the one you  
examined?

THE WITNESS:

I think I could go that far; it is generally  
similar, yes, sir.

THE COURT:

If the photograph is offered as being  
similar to the coat, then I will ad-  
mit it.

MR. DYMOND:

All coats are similar.

THE COURT:

Let us see the rest of the pictures at this  
time so we don't have to bring the  
Jury in and out.

BY MR. OSER:

Q I show you what the State marks for identifica-  
tion as "S-62," and ask you if can recognize  
what is depicted on this photograph and  
whether it is similar to the shirt and tie  
you have testified to as having examined

1 on direct examination?

2 A It is generally similar to the items which I  
3 examined, yes, sir.

4 Q I show you what the State marks as "S-63" for  
5 purposes of identification and ask you  
6 if you can identify what is depicted in  
7 that photograph as being similar to the  
8 type of pellet you examined during your  
9 investigation and to which you testified  
10 on direct examination in reference to  
11 Commission Exhibit 399?

12 A Yes, it is.

13 THE COURT:

14 You have given them a number but you have  
15 not marked them.

16 MR. OSER:

17 That was 63.

18 THE COURT:

19 This is 64 coming up?

20 MR. OSER:

21 Yes, sir.

22 BY MR. OSER:

23 Q I now show you what the State marks as "S-64"  
24 for purposes of identification. I ask  
25 you if you can recognize what is depicted

1 in that exhibit as being similar to the  
2 reconstruction, or part of the reconstruc-  
3 tion you participated in on or about  
4 May 24, 1964?

5 A I don't recall that situation at all. I don't  
6 recall seeing that photograph.

7 MR. DYMOND:

8 May I see that, Mr. Oser?

9 THE WITNESS:

10 I would say that represents generally the  
11 situation that existed, but the angle  
12 of the dotted line across the photo-  
13 graph is entirely out of proportion  
14 to what actually existed.

15 THE COURT:

16 What you could say is that it is similar  
17 and generally represents, aside from  
18 the dotted line, it generally repre-  
19 sents the reenactment?

20 MR. DYMOND:

21 If the Court please, I could be incorrect  
22 in this, but I don't think so, and I  
23 will ask Mr. Oser to tell me if I am  
24 wrong, but I would think the line is  
25 the primary purpose for the use of

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that picture.

MR. OSER:

No, it is not.

THE COURT:

Don't say what the purpose is.

MR. OSER:

I am not going to, Your Honor.

THE COURT:

The witness cannot agree or disagree with what the purpose is.

BY MR. OSER:

Q I show you what the State now marks as "S-65" for the purpose of identification, and ask you if you are familiar with what is contained in this exhibit with anything you have seen before?

A I have seen a bullet similar to that before, yes.

THE COURT:

I understand the legal situation, you wanted to go into this out of the presence of the Jury so they would not see the photographs. I understand the State now wishes to bring the Jury back and examine the witness and make an offer of "S-61, 62, 63, 64, and 65," as

1 being similar, and the witness has  
2 so stated they generally represent  
3 the objects and they are similar.

4 MR. OSER:

5 Similar, that is right, Your Honor.

6 THE COURT:

7 With that understanding, I will admit those  
8 as being similar. You may make your  
9 objection at the proper time, Mr.  
10 Dymond.

11 MR. DYMOND:

12 As to which ruling we object at this time  
13 on the ground the proper foundation  
14 has not been laid for these exhibits  
15 and the statement by the Court that  
16 they are similar --

17 THE COURT:

18 I cannot hear you.

19 MR. DYMOND:

20 And the statement by the Court that they  
21 are merely similar is not sufficient  
22 ground for the introduction or use  
23 in evidence, making the offer, testi-  
24 mony and record up to this time, to-  
25 gether with the Exhibits S-61, 62, 63,



1 64 and 65 and the ruling of the Court  
2 all part of the bill.

3 THE COURT:

4 You will have to renew your objection in  
5 the presence of the Jury.

6 Bring the Jury back.

7 (Whereupon, the Jury was escorted  
8 back into the courtroom.)

9 THE COURT:

10 You may proceed, Mr. Oser.

11 MR. DYMOND:

12 We at this time would like to renew our  
13 bill in the presence of the Jury, with  
14 all of the component parts which I  
15 have set forth previously.

16 THE COURT:

17 You will have to do it in the presence of  
18 the Jury over again, Mr. Oser.

19 BY MR. OSER:

20 Q You have testified you conducted various measure-  
21 ments involving President Kennedy's coat  
22 concerning a hole in his coat, is that  
23 correct?

24 A Yes, sir.

25 Q I show you what the State marks for the purposes

1 of identification as "S-61" and ask you  
2 to view this exhibit, and tell me whether  
3 or not you have ever seen this exhibit be-  
4 fore, and if this exhibit shows a coat  
5 which is similar to the coat you examined  
6 during your investigation, and about which  
7 you have testified, sir?

8 A NO, I have not seen this exhibit before today.  
9 However, it appears to represent a coat  
10 similar to the one which I examined.

11 MR. OSER:

12 At this time the State wishes to offer,  
13 introduce and file into evidence that  
14 which is marked for the purposes of  
15 identification as "S-61," being a  
16 coat similar to the type examined by  
17 Mr. Frazier.

18 MR. DYMOND:

19 To which offer we object on the ground that  
20 proper foundation has not been laid  
21 and the mere similarity is not  
22 sufficient to permit it to be intro-  
23 duced and used in evidence.

24 THE COURT:

25 I will admit it as being similar to the

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object it purports to be.

MR. DYMOND:

To which we object, making the entire  
testimony up to this time, the offer,  
S-61, together with the ruling of the  
Court and the reasons for the objec-  
tion part of the bill.

NO HIATUS HERE.

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BY MR. OSER:

Q I believe you also testified you had occasion to examine the shirt and the tie of President Kennedy with respect to certain holes and tears in these particular items, is that correct?

A Yes, sir.

Q I show you what has been marked as S-62 for the purposes of identification, and ask you whether or not you can tell The Court what is depicted in this particular exhibit is similar to the shirt and tie which you examined during your investigation, sir?

A Yes, it is similar.

MR. OSER:

At this time the State wishes to offer, introduce and file into evidence that which is marked for the purposes of identification as S-62 as being similar.

MR. DYMOND:

Same objection for the same reasons, Your Honor.

THE COURT:

The ruling is the same.

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MR. DYMOND:

Same bill except the exhibit number will  
be different.

(Whereupon, the document offered  
by counsel was received into  
evidence.)

BY MR. OSER:

Q Mr. Frazier, I think you also testified a  
reconstruction was performed in which two  
men or two stand-ins were used for the  
President and Governor Connally in the car  
you photographed, is that correct, sir?

A No, that is not, sir. I didn't take the  
photographs.

Q While you were on the sixth floor of the Texas  
School Book Depository did you have any  
occasion to view a car that was proceeding  
in the direction the Presidential limousine  
was proceeding on November 22, containing  
two people in the relative positions that  
President Kennedy and Governor Connally  
were on that particular day?

A Yes, sir.

Q I show you what the State marks for the  
purposes of identification as S-63, and

1 I ask you whether or not what is depicted  
2 in this particular photograph is similar  
3 to what you have seen during the recon-  
4 struction that you assisted in performing?

5 A I would say the individuals are similar. I  
6 don't recall the dotted line across the  
7 photograph as being in the proper plane  
8 with reference to the horizontal, if the  
9 photograph itself was taken with a  
10 horizontal line along the bottom of the  
11 photograph. Other than that it is similar.

12 MR. OSER:

13 At this time the State wishes to offer,  
14 introduce and file into evidence that  
15 which is marked as S-63 for the pur-  
16 poses of identification.

17 MR. DYMOND:

18 Same objection, Your Honor.

19 THE COURT:

20 Same ruling.

21 MR. DYMOND:

22 Same bill of exception except the exhibit  
23 number will be different.

24 (Whereupon, the document offered  
25 by counsel was received into evidence.)

1 BY MR. OSER:

2 Q Now, Mr. Frazier, referring to State Exhibit  
3 61, the one on the far right, I ask you  
4 can you tell us how or whether or not that  
5 picture of that coat is dissimilar to the  
6 coat you examined?

7 A The photograph doesn't show the detail which  
8 was observed at the time of the examina-  
9 tion since this shows some printing  
10 process as being a copy of a photograph  
11 or a copy of a copy of a photograph. I  
12 can't tell, it may even be from a magazine  
13 article, since this is a picture that  
14 shows the printing process and not the  
15 details of the coat. But generally speak-  
16 ing, it represents the coat.

17 Q With regard to State Exhibit 61, can you point  
18 out for us on that particular visit using  
19 the coat depicted in that exhibit the  
20 location where you found the hole measur-  
21 ing, as you testified, 5-3/8 inches down  
22 from the collar and 1-3/4 inches to the  
23 right of the mid-line of the coat?

24 A No, sir, that coat doesn't show the full collar  
25 and it would not be possible to point out

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the hole.

Q Can you give us the 1-3/4 inches to the right of the mid-line approximately?

A No, sir, the mid-line isn't shown in the photograph, therefore I cannot locate the hole for you.

Q You cannot approximate it for me, Mr. Frazier?

A There is no reference point in this photograph.

Q I show you what appears to be a white line on this particular exhibit, and I'm pointing to the top part of the end of this white line, and ask you whether or not that would not be the approximate location of the hole that you found in President Kennedy's coat?

A There is no way for me to determine that since neither the collar from which I took one measurement is shown nor is the mid-line shown from which I took the other measurement.

Q You cannot approximate the location?

A No, sir.

Q The point I am pointing to now, do you say you cannot find the hole there?

A Are you referring to the top of the right



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shoulder?

Q That is correct.

A No, sir, I cannot.

Q Referring to the shirt, can you tell us the measurements with regard to the hole in the back of the shirt?

A 5-3/4 inches below the top of the collar in the back and approximately 1-1/8 inches to the right of the center of the shirt.

Q Using State Exhibit 62, I direct your attention to the far right-hand quadrant, and ask you whether you can point out on this exhibit the approximate location of the hole you found in President Kennedy's shirt when you measured it and examined it?

A No, sir, because the photograph doesn't represent the back of the collar sufficiently accurately to locate it, nor is the center line of the shirt shown. I can give you the approximate area but I couldn't point it out exactly.

Q Would you give me the approximate area if you would, please?

A There is no way to describe actually this area I am pointing out, except to measure it on

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photograph.

Q Would you please with this pen circle the general area you have just described by pointing?

A Yes, sir. (The witness drew a circle with the pen on the exhibit.)

Q May I ask you to point it out with a red pencil? I think it may show it a little better.

A (The witness drew a red circle on the exhibit.)

Q With regard to the front part of the shirt which you examined, can you use State Exhibit 62, the lower right-hand quadrant, and point out there the approximate location of the slit or tear in the shirt as you found it when you examined it?

A Yes, sir.

Q Will you mark it with a pen, please?

A (The witness marked it with a pen.)

Q I also ask you in regard to the tie which you examined, and refer you to the lower left-hand quadrant of State Exhibit 62, and ask you whether or not you can point out the general area where you located the

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1                   nick or tear in the President's tie when  
2                   you examined it, and if you can will you  
3                   circle that with a red pencil, please?

4       A       Yes, sir. (The witness circled it with a  
5                   red pencil.)

6       Q       The hole as you found it in the coat,  
7                   Mr. Frazier, was that a single hole  
8                   through and through the coat?

9       A       Yes, sir, it was.

10      Q       Would your answer be the same as to the hole  
11                   in the back of the shirt, being a single  
12                   through and through hole in the garment?

13      A       Yes, sir.

14      Q       Can you tell us, Mr. Frazier, during your re-  
15                   construction on May 24, 1964, whether or  
16                   not the coat and the shirt were worn by  
17                   the stand-in at the time you all were  
18                   conducting this reconstruction?

19      A       Only the stand-in for the Governor who was at  
20                   that time wearing the Governor's coat.  
21                   The stand-in for the President was not  
22                   wearing the President's coat.

23      Q       And the coat that the stand-in for the Governor  
24                   was wearing had been worn by the Governor?

25      A       Yes, sir, that is correct.

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Q While you were conducting the reconstruction did you have occasion from your position at the sixth floor window of the Texas School Book Depository, using the telescopic sight, to have your attention drawn to the stand-in of the President by a mark on any particular thing?

A Yes, sir.

Q What was that?

A While looking through the telescopic sight a person on the ground placed his finger against the back of the Presidential stand-in on a particular point. I lined up the telescopic sight on that point. This point was determined from the medical testimony. They placed a mark on the coat at that point and measured approximately 10 inches below that point, and placed another mark this time on the car which represented the spot with reference to the ground at which the bullet struck, since the Cadillac, that is the President's stand-in, was seated approximately 10 inches higher during the reconstruction in the Cadillac than the surveyor said he

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would have been riding in the Presidential limousine. Therefore they placed a mark to represent the actual bullet impact point on the car. This was true for both the President's stand-in and the Governor's stand-in.

Q Can you describe the type of mark that was placed for us in relation to the President's stand-in?

A I recall on the coat was a chalk mark and a piece of white tape on the car, if I remember correctly.

Q Am I correct in saying that in regard to the stand-in for President Kennedy you were using the skin hole in President Kennedy's back as opposed to the coat hole, is that correct?

A Yes.

NO HIATUS HERE

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1 Q In regard to Governor Connally, you were using  
2 the coat hole and not the skin hole of  
3 Governor Connally in your reconstruction,  
4 is that correct?

5 A That I don't know. I don't know whether they  
6 took that into consideration with reference  
7 to the Governor or not.

8 Q In regard to the Governor, you were using the  
9 Governor's coat that he wore that day,  
10 presumably?

11 A Yes, sir.

12 Q Mr. Frazier, can you tell us why the skin hole  
13 of the President, if I may call it that,  
14 was used in regard to the President's stand  
15 in and the coat hole of the Governor was  
16 used?

17 A I just testified I don't know if they used the  
18 coat hole of the Governor, therefore I  
19 can have no opinion as to this question.  
20 I know they used the hole determined by  
21 the distance below the mastoid and the  
22 distance the doctor said the hole occurred  
23 on the President's body to locate that  
24 hole. As far as the Governor is concerned,  
25 I don't know if they did that or not.

- 1 Q Was there a mark on the back of the Governor's  
2 stand-in for you to view from the sixth  
3 floor?
- 4 A Yes, there was.
- 5 Q That particular mark that was placed on the  
6 Governor's stand-in, did that correspond  
7 to the hole in the jacket or coat the  
8 stand-in was wearing?
- 9 A I couldn't tell from the sixth floor. I  
10 couldn't see that well.
- 11 Q At any time did you have an occasion to make a  
12 close observation of these two stand-ins  
13 at any time?
- 14 A Yes, sir.
- 15 Q At the time you had an occasion to view these  
16 gentlemen close up, did you see any mark  
17 on the back of the Governor's stand-in?
- 18 A Yes, sir.
- 19 Q Can you tell us whether or not it was in the  
20 approximate location of where the bullet  
21 hole or hole was in the back of the  
22 Governor's jacket?
- 23 A No, I don't recall whether it was or not.
- 24 Q Did you attempt to find out whether it was or  
25 not?

1 A Did I?

2 Q Yes, sir.

3 A No, sir.

4 Q In referring to State Exhibit 63, what I am  
5 now pointing to, can you tell us whether  
6 or not this appears to be similar to the  
7 scene as you saw it on that particular  
8 day during part of the reconstruction?

9 A No, sir, it does not.

10 Q What is dissimilar about it, sir?

11 A In the photograph the President is approximately  
12 on the same level with the Governor, where-  
13 as during the reconstruction he was located  
14 slightly higher than the Governor. Second-  
15 ly, the location of the white dot on the  
16 President's stand-in with the line through  
17 it is located too far down on the person.  
18 I don't recall whether or not there was a  
19 chalk circle on the Governor's stand-in's  
20 coat.

21 Q When you viewed the Governor's stand-in through  
22 the telescopic sight, did you see any mark  
23 on this particular person?

24 A Yes, sir, I did. I don't recall what type mark,  
25 whether it was a piece of white tape or chalk.



1 Q Could it have been a piece of white tape or  
2 chalk mark on the coat?  
3 A Yes, sir.  
4 Q Mr. Frazier, you testified on direct examination  
5 with regard to the Zapruder Frame 313, in  
6 answer to one of Mr. Dymond's questions,  
7 that you had a clear shot of the President  
8 at Frame 313 from the sixth floor of the  
9 Texas School Book Depository. Is that  
10 right?  
11 A Yes, sir.  
12 Q In referring to State Exhibit 36, this mock-up,  
13 I would ask you to step down and ask you  
14 whether or not you can recognize what this  
15 depicts. It is not made to scale. I ask  
16 you whether or not it is similar to any  
17 location you have seen before.  
18 A Yes, sir, I recognize the general scene.  
19 Q Can you tell us what that general scene depicts  
20 to you, sir, what location in the United  
21 States?  
22 A The location of Dallas, Texas.  
23 Q Would that be a location commonly known as  
24 Dealey Plaza, sir?  
25 A Yes, sir.

Q In using State Exhibit 36, can you point out what location you were, or what window you were in when you were constructing your part of the reconstruction?

In the window just below the cornice and one floor down from the seventh floor, which would be the sixth floor window, the window on the corner nearest the adjacent building.

Can you tell us whether or not on Frame 313 of the Zapruder film, if there was not a clear shot at the President's head or President's body from the top of the Records Building?

I was not on the Records Building, so I have no way to judge that.

Q Did you have occasion to view the Records Building?

I don't know what the Records Building is.

If I point to this particular building, this light gray or light blue building and ask you whether or not there was a clear shot of the Presidential limousine at Frame 313 from this location --

I couldn't tell you, I was never there.

Do you recall any obstructions that would have

1            prevented anyone having a clear shot at  
2            the Presidential limousine from that  
3            position?

4            A    Only a few trees along the pond or pool along  
5            the street there. I don't recall how high  
6            they were or where they were located.

7            Q    I also ask you whether or not in referring to  
8            the red building, which is next to the  
9            Texas School Book Depository in which  
10           you were, whether or not from this particu-  
11           lar building, from the roof or top floor,  
12           whether or not there was a clear shot into  
13           the Presidential limousine at approximately  
14           Frame 313 of the Zapruder film?

15           A    I cannot answer that, since I was never in that  
16           building or on it.

17           Q    Do you recall any particular obstructions that  
18           would have prevented such a shot?

19           A    No, sir.

20           Q    Can you tell us whether or not there was a  
21           clear shot at the Presidential limousine  
22           at Frame 313 from the area of the grassy  
23           knoll, more specifically the picket fence  
24           area?

25           A    I don't know to what you are referring.

1 Q I point on this particular plat to an area  
2 of Dealey Plaza containing a small build-  
3 ing, and to the right of that particular  
4 building between the railroad tracks a  
5 small picket fence area on a rise higher  
6 than the ground level of the street, and  
7 ask you whether or not from that particu-  
8 lar location there could have been a clear  
9 shot at the Presidential limousine at  
10 approximately Frame 313?

11 A I can't answer that unless I had been over  
12 there and walked along that area.

13 Q At any time during your investigation and re-  
14 construction did you take any views or  
15 do any investigation in the area I have  
16 described, namely, the light blue-colored  
17 building, the red building or the area of  
18 the picket fence?

19 A No, sir.

20 Q Mr. Frazier, can you tell us from the position  
21 you were in at the sixth floor of the  
22 Texas School Book Depository Building,  
23 what the vertical angle, the angle from  
24 the window to the street area at Frame 313  
25 was? Can you calculate that? If so, can

1                   you give me the approximate angulation  
2                   downward?

3           A       As I recall it was approximately 17 degrees.

4           Q       Mr. Frazier, can you tell me if the Presidential  
5                   limousine was in the position it was in  
6                   at Frame 313, whether or not you all took  
7                   a perpendicular line and drew that perpendicu-  
8                   lar through the Governor and through Presi-  
9                   dent Kennedy back up Elm Street, and then  
10                  calculated the lateral angle from the sixth  
11                  floor window down to the Presidential  
12                  limousine at Frame 313?

13          A       I don't know what you mean when you refer to a  
14                  perpendicular line.

15          Q       Assuming Mr. Dymond is the Governor and I am  
16                  the President, would you say we are in  
17                  relatively the same position? By that I  
18                  mean I am in back of him. Did the  
19                  Zapruder film show that to you, one behind  
20                  the other?

21          A       No, sir, the Governor was sitting more to the  
22                  left.

23          Q       Would you say basically we were one behind the  
24                  other?

25          A       No, sir, I would say the Governor was sitting

1 more to the left of the President, not  
2 completely in front of him but partway  
3 over.

4 Q Then if you take a line, and using myself as  
5 the President, and draw a line straight  
6 through me, all the way back, and placing  
7 the car at Frame 313, and drew that line  
8 all the way back, did you calculate the  
9 lateral angle from the sixth floor window  
10 down to where that car was?

11 A I don't know whether it was actually recorded  
12 or not. It was plotted on a plat which  
13 showed the horizontal angle.

14 Q The horizontal angle?

15 A That's right, between the axis of the car,  
16 but in that reference the axis created  
17 between the center of the President's  
18 body and the center of the Governor's  
19 body, it was not the same as the axis of  
20 the vehicle.

21 Q Did you calculate it with regard to the skin  
22 hole in the President's back which you  
23 were using in your reconstruction, drawing  
24 a line through the skin hole in the  
25 President and back this way and calculate

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that angle down for the lateral angle?

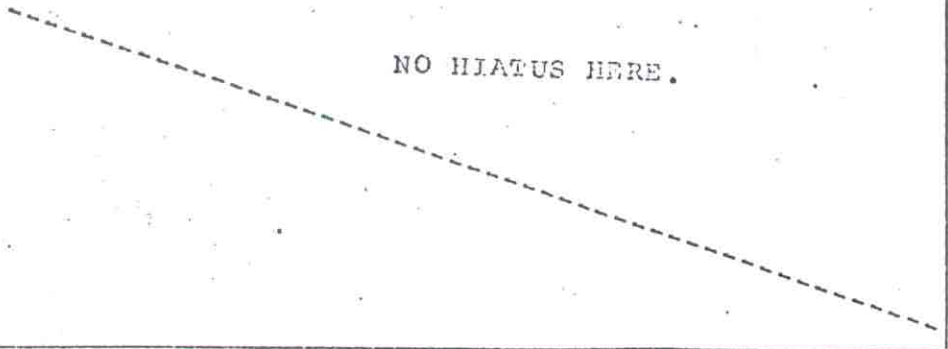
A I don't understand what you are talking about.

The angle of the President in the car, the angle of the car in the street?

Q You are at the sixth floor of the Texas School Book Depository Building looking down at this car which you are using in this reconstruction. As you are looking down at that car and the individual representing the President, when you saw this white spot or chalk mark or white tape on the back of the stand-in of the President, which represented the skin hole, did you take a straight line and draw it through that individual straight back and calculate how far to the right you were, by that I mean the lateral angle?

A You mean the lateral angle of the axis of the automobile to the building?

NO HIATUS HERE.



1 Q No. Did you all draw a line through there  
2 and calculate --

3 MR. DYMOND:

4 I object. In order to have an angle you  
5 have to have two points, and he has  
6 not asked that.

7 THE COURT:

8 I think the question was very confusing.  
9 I don't think the witness understands  
10 it. I don't understand what the  
11 question is either.

12 BY MR. OSER:

13 Q How many lateral angles did you all measure?

14 A As I recall the angles were plotted. I don't  
15 know whether they actually measured the  
16 angles or not. That was not part of my  
17 job.

18 Q If they were measured you couldn't tell us at  
19 this time what those angles were?

20 A That is correct.

21 Q Mr. Frazier, directing your attention to State  
22 Exhibit 34, I ask you whether or not you  
23 can see this particular exhibit from where  
24 you are, sir?

25 A Yes, sir.



1 Q I ask you whether or not you recognize what  
2 this is?

3 A It represents the Dealey Plaza area in Dallas.

4 Q Am I correct in pointing to a window in a  
5 building as being where you were at the  
6 time of the reconstruction on the sixth  
7 floor?

8 A Yes, sir.

9 Q Are you familiar also with the fact the street  
10 that passes in front of the Texas School  
11 Book Depository is known as Elm Street and  
12 the street approaching the Texas School  
13 Book Depository is known as Houston?

14 A One of the streets at the front of the deposi-  
15 tory was Elm Street. There is a very  
16 short dead-end street in front of the  
17 building.

18 Q What about the street that is approaching the  
19 Texas School Book Depository, is that  
20 Houston?

21 A I believe it was, yes, sir.

22 Q From the sixth floor of the Texas School Book  
23 Depository, were you familiar with the  
24 parade route the Presidential motorcade  
25 took that particular day?

1 A Only a portion of it. That is, when they  
2 entered Houston and made the turn onto  
3 Elm and proceeded down under the underpass.

4 Q Were you familiar with the fact that parade  
5 came down Houston towards the School Book  
6 Depository, turned onto Elm Street and  
7 went under the triple underpass, is that  
8 correct?

9 A Yes, sir.

10 Q While you were in the Texas School Depository  
11 sixth floor window, can you tell us  
12 whether or not there was a clear shot  
13 into the Presidential limousine as the  
14 President approached?

15 A There would have been, yes, sir.

16 Q From your view from the sixth floor of the  
17 Texas School Book Depository, can you tell  
18 us whether or not the view from that window  
19 down to Houston Street gave you a fuller  
20 view of the Presidential stand-in's body  
21 than it did looking down Elm Street as the  
22 car moved away from you?

23 A I don't know whether it would or not.

24 Q Can you tell us whether or not, sir, the  
25 reconstruction car drove down Houston

1 Street towards the Texas School Book  
2 Depository and turned left onto Elm Street  
3 at any time you were in the sixth floor  
4 window?

5 A No, sir, it did not.

6 Q Do you have any opinion as to whether or not,  
7 having been there, having done this  
8 reconstruction, whether more of the  
9 President's body as seated in the  
10 Presidential limousine would have been  
11 exposed as the car came to the sixth  
12 floor window down Houston Street as op-  
13 posed to going away from the sixth floor  
14 on Elm Street?

15 A No, sir, I don't.

16 Q Speaking of the examination of the gun, I  
17 believe you testified, Mr. Frazier, that  
18 the gun you examined was similar to this  
19 particular gun, is that correct?

20 A Only in certain features. It is different in  
21 other features.

22 Q I believe you said one of the differences was  
23 this gun was blued and the other gun was  
24 not.

25 A No, sir, I said this gun appeared to be polished

1 and blued, whereas the gun I examined had  
2 a rough surface.

3 Q What about the color?

4 A The stock is brown.

5 Q What was the color of the gun you examined?

6 A Black.

7 Q I think you also made reference to the fact  
8 there was something different with regard  
9 to the telescopic sight of the particular  
10 gun I am holding in my hand, State  
11 Exhibit 18, as opposed to the gun you  
12 examined?

13 A Yes, sir.

14 Q Can you describe what the difference was?

15 A The mount of the telescopic sight on this  
16 exhibit has four screws in it, whereas the  
17 mount of the gun I examined only had two  
18 screws in it. It had in addition one  
19 hole which had not been used in the mount  
20 for which there was no hole in the gun.  
21 Secondly, this mount is located too far  
22 forward of the gun as compared with the  
23 mount of the gun I examined.

24 With reference to the scope, it is  
25 moved too far to the rear.

1                   Those are about all the differences  
2                   with regard to the telescope.

3       Q     The gun you examined, Mr. Frazier, when was  
4             the first time you saw that particular  
5             gun?

6       A     I don't recall the exact time. It was on the  
7             23rd of November. I don't recall the  
8             exact time. I think it was about 7:00  
9             o'clock in the morning of the 23rd of  
10            November, 1963.

11      Q     You do recall it was the next day after the  
12             assassination?

13      A     That's my recollection, yes.

14      Q     Mr. Frazier, can you tell me how the gun came  
15             into your possession from Dallas, Texas,  
16             the scene of the homicide, when Lee Harvey  
17             Oswald was still alive at this time?

18      A     No, sir, I can only tell you I received it from  
19             a field agent of the F.B.I.

20      Q     He was stationed at Dallas, is that right?

21      A     I don't know where he was stationed.

22      Q     But he was from the Dallas F.B.I. Office?

23      A     Yes, sir.

24      Q     Since you conducted firing tests with the rifle  
25             you had, the first set of tests were shot

1                   at 45 feet, is that right?

2     A     Yes, sir.

3     Q     How many men were shooting?

4     A     Three.

5     Q     What were those men's names?

6     A     Courtland Cunningham, Charles Killian and

7                   myself.

8     Q     I believe you testified the time to get off

9                   three shots at 45 feet distance was 5.9

10                  seconds, is that right, sir?

11    A     Yes, sir.

12    Q     How did you arrive at that figure?

13    A     Both Cunningham and Killian had stop watches.

14                  They began timing the firing from the

15                  sound of the first shot and ended it at

16                  the sound of the third shot. Their

17                  watches agreed.

18    Q     I take it each one of you shot at different

19                  times? Either you shot first,

20                  Cunningham second and Killian third, or

21                  something of that sort, is that right?

22    A     Yes, sir.

23    Q     When you conducted this test at 45 feet, how

24                  was the gun loaded? What did it have in

25                  it?

1 A Three cartridges, two in the clip and one in  
2 the chamber.

3 Q So before you started firing at 45 feet,  
4 Mr. Frazier, the gun you had had a clip  
5 in the rifle with two live cartridges and  
6 one cartridge in the chamber with the bolt  
7 closed, is that correct?

8 A Yes, sir.

9 Q Ready to fire?

10 A Yes, sir.

11 Q In that time you began firing, you squeezed  
12 off the first shot and got off three shots  
13 in 5.9 seconds?

14 A Yes, sir.

15 Q Who got off the shots in 5.9 seconds?

16 A I did.

17 Q What was Cunningham's speed?

18 A Approximately 8 seconds.

19 Q What was Mr. Killian's?

20 A Approximately 9 seconds.

21 Q Then you all moved to 75 feet away, is that  
22 right?

23 A Yes, sir.

24 Q Who shot then?

25 A I did.

1 Q Did anyone else shoot?

2 A No, sir.

3 Q Why not?

4 A No particular reason that I can recall.

5 Q When you shot at 45 feet, Mr. Frazier, or when

6 the three of you shot at 45 feet, why

7 didn't you take the average time between

8 the three men of 9 seconds, 8 seconds and

9 5.9?

10 A I have never done that.

11 Q You have not -- have never done that?

12 A We only fired, each of us only fired three

13 shots at 45 feet and we didn't average

14 the times.

15 Q You can't tell us why Cunningham or Killian

16 didn't fire at 75 feet?

17 A No, sir.

18 Q Could it be because their time was way off at

19 9 seconds and 8 seconds at 45 feet?

20 A No, sir. I don't know what the reason was.

21 Q Those two agents that were firing with you at

22 45 feet, do they hold a rating of a

23 ballistics expert in the F.B.I.?

24 A Yes, they do.

25 Q What were your two times at 75 feet?



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5/10

1 A 4.8 and 4.6.

2 Q Then if I recall your testimony, you all moved  
3 outside to approximately 300 feet away, is  
4 that right?

5 A Yes, sir.

6 Q Who did the shooting outside?

7 A I did.

8 Q Killian and Cunningham didn't shoot outside?

9 A No, sir.

10 Q Why?

11 A I don't know.

12 Q What were your times outside, Mr. Frazier at  
13 300 feet?

14 A 5.9 seconds for one series of three shots.  
15 6.2 seconds, 5.6 seconds, and 6.5 seconds,  
16 all being a series of three shots.

17 Q At the time that you all were conducting these  
18 various tests, who was the highest ranking  
19 agent at that particular time? Was it you,  
20 Mr. Cunningham or Agent Killian?

21 A I don't understand what you mean by highest  
22 ranking.

23 Q Were you over the other two agents? Could you  
24 order them what to do?

25 A Could I tell them, instruct them what to do?

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1 Q Yes, sir.

2 A No, sir.

3 Q Could they order you what to do?

4 A No, sir.

5 Q In other words, you all were the same rank in  
6 the Bureau?

7 A We all held the same position, special agent,  
8 firearms identification, F.B.I. Labora-  
9 tory.

10 Q What type of targets were you using?

11 A At 45 feet we used a silhouette target. At  
12 75 feet we made a round spot on the back  
13 of a paper target. At 300 feet we used  
14 black pasters forming a square, as I  
15 recall, on a white background.

16 Q Will you tell me, I think you testified before  
17 the distance from the sixth floor of the  
18 Texas School Book Depository to the  
19 approximate location of the President's  
20 car in frame 313, was 265 feet, is that  
21 correct?

22 A Yes.

23  
24 NO HIRATUS HERE.  
25

1 Q Why did you not use the distance of 265 feet  
2 as opposed to 300 feet?

3 A I don't recall, except the Warren Commission  
4 asked us to conduct these tests at 100  
5 yards or 300 feet. Their reasons for this  
6 I don't know.

7 Q As an expert in this particular field, and as  
8 an investigating officer with all your  
9 years of experience, would you not have  
10 deemed it more reasonable to have shot  
11 the gun at 265 feet, the distance you  
12 measured from the Texas School Book De-  
13 pository down to the President's car,  
14 rather than 300 feet?

15 A No, sir.

16 Q Why not?

17 A All the shots were not fired at 265 feet,  
18 therefore it had no bearing on the situa-  
19 tion.

20 Q Were any of them fired at 45 feet?

21 A I don't know.

22 Q Were any of them fired at 75 feet?

23 A I don't know.

24 Q Were any of them fired at a still target?

25 A No, sir.

1 Q Why did you all use a still target and not a  
2 moving target?

3 A Because we were conducting accuracy and speed  
4 tests at the same time in order to deter-  
5 mine how fast three aimed shots could be  
6 fired from this weapon, and recording that  
7 time.

8 Q You were not interested in ascertaining whether  
9 or not someone on the sixth floor of the  
10 Texas School Book Depository could have  
11 gotten off three shots with the alleged  
12 accuracy you talked about at a moving tar-  
13 get at the respective distance?

14 A That was not the purpose of our test, otherwise  
15 we would have fired at moving targets.

16 Q But you didn't, did you?

17 A No, sir, we did not.

18 THE COURT:

19 Mr. Oser, I know you are on a second train  
20 of thought, but it is about two minutes  
21 after 12:00. I hate to interrupt at  
22 this moment, but I expect you will  
23 have more questions of Mr. Frazier.

24 MR. OSER:

25 I surely will.

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THE COURT:

Then we will take a recess for lunch.

Mr. Oser, will you need these exhibits in the same position they are in when we come back from lunch?

MR. OSER:

I probably will, Your Honor. I don't know whether we will or not. I will say yes at this time.

THE COURT:

Gentlemen, I must admonish you and instruct you not to discuss the case amongst yourselves or any other person until it is given to you for your decision and verdict.

MR. OSER:

Your Honor, will you also instruct the witness he has a right to talk to the Defense Attorney and no one else during the recess.

MR. ALFRED:

That includes the Government Attorneys.

THE COURT:

He can certainly speak to his own attorney.

I understand the Assistant U.S. Attorney

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is in Court, Mr. Olson. If he wants to converse with the witness, certainly he may.

MR. OSER:

No objection to that.

THE COURT:

Don't discuss your testimony with any other witness who has already testified or who will be called to testify. You may discuss it with the Defense Attorney or the U.S. Attorney.

(Whereupon, at 12:05 o'clock p.m., a luncheon recess was taken until 1:30 o'clock p.m.)

AFTER THE RECESS:

THE COURT:

Are the State and Defense ready to proceed?

MR. OSER:

The State is ready, Your Honor.

MR. DYMOND:

The Defense is ready, Your Honor.

THE COURT:

You may proceed.

BY MR. OSER:

- 1 Q Mr. Frazier, these test firings you conducted,  
2 where were they conducted?
- 3 A The first two were on the indoor range.
- 4 Q Whereabouts in the United States?
- 5 A In Washington, D.C., the first two tests, and  
6 the last test was in Quantico, Virginia,  
7 at the U.S. Marine School.
- 8 Q The first two tests, was that in the FBI Firing  
9 Range in Washington, D.C.?
- 10 A Yes, sir.
- 11 Q From your examination and reconstruction, isn't  
12 it true you testified from the sixth floor  
13 of the Texas School Book Depository down  
14 to the approximate location of where the  
15 limousine was in the Zapruder Film Frame  
16 313, that was approximately 265 feet, is  
17 that correct?
- 18 A Yes, sir.
- 19 Q Can you tell me how far you were from the  
20 ground level on the sixth floor of the  
21 Texas School Book Depository?
- 22 A Approximately 60 feet. A little over 60 feet.
- 23 Q While you were at the firing range, the indoor  
24 firing range, were you 60 feet above the  
25 target you were shooting at?

1 A No, sir.

2 Q How far were you above the target you were  
3 shooting at?

4 A We were firing horizontally.

5 Q Why weren't you 60 feet above the target which  
6 you were shooting at?

7 A I conducted tests at Quantico, Virginia, at the  
8 request of the Commission.

9 Q I am speaking about the two tests you had in-  
10 side now. Why didn't you shoot at a 60-  
11 foot elevation?

12 A That was not the purpose of the test.

13 Q In other words, the Warren Commission didn't  
14 want to know this, is that right?

15 A There was no Warren Commission at that time.

16 Q The representative of the Warren Commission or  
17 the Federal Government didn't want to know  
18 it at that time?

19 MR. DYMOND:

20 We object. How can the Federal Government  
21 want to know anything? The Federal  
22 Government is not a person.

23 THE COURT:

24 Rephrase your question.

25 BY MR. OSER:



1 Q No one told you not to shoot at 60 feet?

2 A No, sir.

3 Q Then why didn't you?

4 A I selected the ranges on the indoor range inside  
5 the building at Washington, D.C., for the  
6 purpose of firing time, rapid fire and  
7 accuracy tests with this rifle to deter-  
8 mine at that point in this investigation  
9 whether or not three aimed shots could be  
10 fired from this rifle in a matter of six  
11 seconds. There was no other purpose for  
12 this firing, and it was done horizontally  
13 at 45 feet and 75 feet, because that is  
14 the position on the range where there are  
15 lights to illuminate the targets.

16 Q You say you were trying to ascertain whether  
17 or not this rifle could fire within six  
18 seconds. Why the figure of six seconds?

19 A According to information which had come to me  
20 from various sources I was asked to conduct  
21 this test to see if it could be fired in  
22 that length of time accurately.

23 Q Am I correct in stating that only you of the  
24 three marksmen there could do this in six  
25 seconds?

- 1 A I was the only one that fired 75 feet. I don't  
2 know if the others could or not.
- 3 Q How about 45 feet?
- 4 A My time was five and nine-tenths seconds at  
5 45 feet.
- 6 Q What was Mr. Cunningham's?
- 7 A Approximately eight seconds.
- 8 Q What was Mr. Killion's?
- 9 A Nine seconds.
- 10 Q Above six seconds. Eight and nine are above  
11 six, is that right?
- 12 A Yes, it is.
- 13 Q Two marksmen firing at 45 feet couldn't shoot  
14 it at less than six seconds?
- 15 A That is not so. Their tests were made to see if  
16 they could fire it accurately under those  
17 conditions. Their targets were primarily  
18 accuracy targets. However, they were timed  
19 to see how long it took.
- 20 Q Didn't you say your purpose was to ascertain  
21 the time of firing and accuracy? Now you  
22 are telling me the only reason you were  
23 firing was because of accuracy. Which was  
24 it?
- 25 A I didn't just tell you that. I said we fired

1           these tests to determine whether we could  
2           fire this weapon three times in six seconds  
3           with aimed shots, that is for accuracy.  
4           The primary purpose was to determine the  
5           accuracy under rapid fire conditions.

6   Q    At the outdoor range was the target some 300  
7           feet away?

8   A    Yes, sir.

9   Q    What was the elevation at that time off the  
10          ground?

11  A    I don't recall, but approximately three or four  
12          feet.

13  Q    Why didn't you set up a range where you would  
14          have been 60 feet off the ground if you  
15          were trying to simulate the sixth floor  
16          of the Texas School Book Depository Build-  
17          ing?

18  A    We selected our conditions under the instruc-  
19          tions of the President's Commission. They  
20          said fire the shots at a stationery target  
21          at a horizontal distance of 100 yards. Why  
22          they selected those values I don't know.

23  Q    At any time, Mr. Prazier, did you conduct any of  
24          these firing tests with this particular  
25          rifle in any close proximity to what is

1           alleged to have happened on November 22,  
2           1963? By that I mean, the elevation of  
3           approximately 60 feet off the ground at  
4           265 feet downrange of a moving target?

5       A     No, sir.

6       Q     When you were testing this rifle at the indoor  
7           range and outdoor range, I believe you  
8           said one bullet was already in the chamber,  
9           two in the clip, is that right?

10      A     Yes, sir.

11      Q     When did you start the timing? When was the  
12           time started and when was the time stopped?

13      A     The time was started at the time of the first  
14           shot and stopped at the sound of the last  
15           shot.

16      Q     May I have the rifle, please? Mr. Frazier, on  
17           the outdoor range I believe you said one  
18           bullet was in the chamber, two of them in  
19           the clip and the time was started at the  
20           sound of the first shot and stopped when?

21      A     At the sound of the last shot, the third shot.

22      Q     At that time I believe you said your times were  
23           5.9 seconds, 6.2 seconds, and 5.6 seconds,  
24           am I correct in that?

25      A     Yes, sir, that is correct.

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Q Mr. Frazier, can you tell me whether or not  
these calculations of time took into  
consideration how long it took to draw  
the first bead?

A They did not.

NO HIATUS HERE.

1 Q So if it was calculated, sir, from the time  
2 it took you to take the first bead and  
3 then go all the way through to the last  
4 shot, the times would have been much more  
5 than 5.9, 6.2 and 5.6, am I right?

6 A It would take somewhat more time to aim the  
7 first shot, yes, sir. How much I have  
8 no idea of knowing. You could take an  
9 hour to aim the first shot.

10 Q An hour?

11 A Yes, sir.

12 Q Therefore, as an expert in ballistics and a  
13 rifleman, would you say if someone was  
14 shooting from the sixth floor of the Texas  
15 School Book Depository Building, before  
16 that individual got the first shot off he  
17 had to take aim?

18 A Not necessarily.

19 Q He would if he had to hit a moving target.

20 A That was not part of your question, sir.

21 Q Then I add to it, to hit a moving target,  
22 whether or not he would have to take aim?

23 A Yes, he would.

24 Q Mr. Frazier, can you give me an approximation  
25 of time as to how long it took you on the

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300 foot range to aim and then get off  
three shots?

A I can give you no estimate because that was no  
part of our test. We paid no attention  
to the time required, since we were  
instructed to time the shots from the  
sound of the first shot and end it at  
the sound of the last shot. There was  
no point in recording an unknown aiming  
time before the test began.

Q Did you not deem it important to ascertain  
exactly how long it took an individual  
to shoot from the sixth floor, including  
the aiming of the rifle and going all  
through three shots?

MR. DYMOND:

We object on the ground Counsel is arguing  
with the witness at this time.

THE COURT:

I think, Counsel, he has answered the  
question.

BY MR. OSER:

Q I believe your answer was that the Warren  
Commission didn't want you to ascertain  
this. They wanted you to ascertain from

1 sound to sound, is that right, basically?

2 A Yes, sir.

3 Q Mr. Frazier, in speaking of this particular

4 gun, am I not correct in stating this

5 particular gun doesn't contain one thing

6 the gun you examined contained, and by

7 that I mean the strap?

8 A State that over again, please.

9 Q Did the gun you examined contain a sling strap

10 or not?

11 A Yes, it did.

12 Q Can you describe the sling strap to us using

13 the gun, approximately where it was

14 attached?

15 A The sling strap attachments on this rifle are

16 not like those on the rifle I examined.

17 It would be difficult to describe on this

18 rifle. However, one was attached near

19 the butt of the weapon and one near the

20 front of the hand guard, approximately

21 half-way between the chamber and the

22 muzzle of the weapon.

23 Q Now this gun that you examined containing this

24 strap, would this help in any way in

25 steadying the gun to make the shooting



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more accurate?

A I would say yes, it would assist in accurate shooting of the rifle but not necessarily under rapid fire conditions.

Q When you shot the rifle were you able to find this assisted you in your accuracy in shooting this particular rifle?

A No, I didn't find that.

Q Why was that, Mr. Frazier?

A I found it difficult for me to use this sling, therefore, I didn't use it.

Q Therefore, because you found this particular strap on the gun difficult to use it was of no benefit to you in using it when you shot this particular gun on the range, is that correct?

A Yes, to the best of my recollection I never fired the rifle under rapid fire conditions using the sling. I never fired it at any time using the sling.

Q When you were test firing the rifle, Mr. Frazier, on the 300 foot range, can you tell us how long it took you to get off the first two shots? In other words, the first shot, the reloading and the

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second shot?

A Not exactly, no, I cannot. We did not time the two, the two-shot interval.

Q Why not, sir?

A I saw no purpose in it.

Q Can you tell me approximately how fast you got off two shots on the 300-foot range? Let me correct that question and ask you if you can tell me approximately how long it took you to get off the first two shots on the 300-foot range?

A I would say it would approximate half the total time, not exactly half, possibly, but in the neighborhood of three seconds.

Q In the neighborhood of three seconds?

A Yes, sir.

Q If you took into consideration, Mr. Frazier, how long it took you to aim the first shot, how long would you say approximately it took you to get off the first two shots on the 300-foot range?

A I couldn't estimate that. I don't know how long it took to aim the first shot.

Q On Direct Examination, Mr. Frazier, Mr. Dymond was asking you some questions about the

1 sounds or reports from a rifle, about  
2 sonic boom. Being a ballistics expert  
3 can you tell me whether or not the  
4 locality or the type of topographical  
5 area in which a rifle may be shot, would  
6 this cause the sound of a rifle to vary  
7 in any degree?

8 A It can, yes.

9 Q In other words, if I were out in a prairie,  
10 no trees, and I shot this rifle, would  
11 this sound from this rifle sound differ-  
12 ent from if I shot this rifle in the  
13 downtown of the City, say downtown New  
14 Orleans, where all the buildings are?

15 A I would say the quality of the sound might  
16 change. There may be echoes from the  
17 buildings, but I still think you would  
18 hear the bullet report, that is the sonic  
19 report of the bullet and the muzzle report  
20 of the exploding gases, but there could be  
21 echoes off the buildings.

22 Q In the reconstruction that you took part in,  
23 Mr. Frazier, was there any effort made on  
24 your part, or anybody present, to test any  
25 other originating point the rifle may have

1                   been shot from other than the sixth floor  
2                   of the Texas School Book Depository  
3                   Building?

4       A       I don't know.

5       Q       Did you test any other originating point from  
6                   where the rifle may have been shot?

7       A       I didn't test any and I don't know anyone else  
8                   did.

9       Q       Why didn't you test any other originating point  
10                  other than the Texas School Book Depository  
11                  Building?

12      A       I was not asked to.

13      Q       Mr. Frazier, when you test fired the rifle that  
14                  you had at the time you did all your tests,  
15                  can you tell us what the condition of the  
16                  sight was, as to whether or not it was  
17                  securely fastened to the rifle itself?

18      A       It was.

19      Q       Can you tell me what the condition of the  
20                  sight was when you received the rifle as  
21                  to whether or not it was securely fastened  
22                  to the rifle itself?

23      A       It was not. The screws were loose.

24      Q       Because of the screws being loose, am I correct,  
25                  or safe in saying, the sight wobbled to

14. 7/8

1                   some extent or moved?

2     A     Yes, when I received the weapon that is the

3                   situation.

4     Q     As an expert in the field of ballistics, the

5                   fact that a telescopic sight is on a

6                   rifle and in such a condition that it

7                   moves because it is not securely fastened,

8                   would this in any way affect the accuracy

9                   of the shooting of this rifle, sir?

10    A     Yes, sir.

11    Q     In shooting this rifle, Mr. Frazier, or the

12                   rifle you shot rather on the range, when

13                   you shot this rifle, after you shot the

14                   first shot can you tell us whether or not

15                   in rebolting the gun you had to move your

16                   eye away from the scope?

17    A     Yes, sir, that was necessary.

18    Q     Why was that necessary?

19    A     To prevent the bolt of the rifle from striking

20                   me in the face as it came to the rear.

21    Q     You have to draw a bead, fire, remove your eye

22                   from the sight you had on the target every

23                   time you rebolted, is that right, sir?

24    A     Yes, sir.

25    Q     When you fired that particular rifle on the

1 range, was the scope sufficiently fastened  
2 tightly to the gun?

3 A Yes, it was.

4 Q How did you accomplish that, sir?

5 A With a screwdriver.

6 Q You tightened the telescopic sight to the gun  
7 before you shot it?

8 A Yes, sir.

9 Q Mr. Frazier, before you tightened the telescop-  
10 ic sight of the rifle, did you have  
11 occasion to shoot that rifle?

12 A No, sir.

13 Q Do you know whether or not anyone shot the  
14 rifle in the condition you received it  
15 first? By that I mean, the telescopic  
16 sight being loose?

17 A No one in the F.B.I. Laboratory fired it. I  
18 don't know if anyone else did or not.

19 Q Mr. Frazier, I show you what the State has  
20 marked for the purpose of identification  
21 as S-64, and I ask you to view this  
22 exhibit and tell me whether or not you have  
23 had occasion to see anything similar to  
24 what is depicted in this exhibit?

25 A Yes, sir, I have.

1 MR. OSER:

2 At this time the State wishes to offer,  
3 introduce and file in evidence that  
4 which the State has marked for the  
5 purposes of identification as S-64.

6 MR. DYMOND:

7 Same objection.

8 THE COURT:

9 My ruling is the same.

10 MR. DYMOND:

11 Same bill, except making the exhibit  
12 No. S-64.

13 (Whereupon the document offered  
14 by Counsel was received in  
15 evidence.)

16 BY MR. OSER:

17 Q Mr. Frazier, I believe you testified on Direct  
18 Examination that you had an occasion to run  
19 a test on a pellet, an intact pellet,  
20 involved in this investigation you were  
21 conducting, is that correct?

22 A No, sir, I didn't testify that it was an intact  
23 pellet.

24 Q Did you test a pellet?

25 A Yes, I did.

1 Q Can you describe the pellet for me, please?

2 A I tested three. One of them was a bullet in  
3 practically original condition, except at  
4 the base of the bullet it was flattened  
5 sideways, lead had been extruded from the  
6 base to a small amount. The rest of the  
7 bullet was in practically original condi-  
8 tion, except for the rifle impressions  
9 from the barrel of the rifle. Other  
10 pellets consisted of jacket fragments,  
11 that is the nose portion of the bullet,  
12 and base portions of the bullet, being the  
13 jacket portion in the one instance and  
14 jacket and part of the lead core in the  
15 other instance.

16 Q This pellet you described as being slightly  
17 smashed or bent on the back side of it,  
18 was this Commission Exhibit 399?

19 A Yes, sir.

20 Q I show you, and ask you again to refer to  
21 State Exhibit 64, whether or not that  
22 photograph of that particular pellet is  
23 similar to the pellet, Commission Exhibit  
24 399, that you examined?

25 A Yes, I would say it shows it fairly well.



1 Q Did you also testify that you examined various  
2 cartridges that were submitted to you for  
3 examination in regard to the rifle you  
4 had, is that right?

5 A Just one cartridge and three cartridge cases.

6 THE COURT:

7 Mr. Oser, I think you should make a cor-  
8 rection. When the witness described  
9 the cartridge, I believe he means the  
10 pellet still being in the casing.  
11 When he describes the cartridge casing  
12 he means the cartridge without the  
13 pellet.

14 MR. OSER:

15 I will straighten that up right now.

16 BY MR. OSER:

17 Q I show you what the State marks as Exhibit S-66  
18 for identification, and ask you to view  
19 this exhibit and say whether or not you can  
20 tell us what type of bullet this is?

21 A This is a cartridge from which the powder has  
22 been removed. It consists other than that  
23 of a 6.5 millimeter Mannlicher-Carcano  
24 cartridge, or an Italian military cartridge  
25 which are made at East Alton, Illinois.

1 Q Can you describe for the Gentlemen of the Jury 15:  
2 what parts make up this cartridge?

3 A The part of the cartridge which leaves the  
4 barrel consists of the bullet or forward  
5 portion of the cartridge which is fastened  
6 into the neck of the cartridge case, the  
7 cartridge case being the brass rear portion  
8 of the cartridge which contains in its  
9 base the primer which serves to ignite  
10 the cartridge when the firing pin strikes  
11 the primer.

12 Q In referring to Commission Exhibit 399, or  
13 the bullet you examined, can you point  
14 out what area that is you are speaking of?

15 A The nose portion.

16 Q In regards to the test you made on the casings  
17 that were submitted to you, can you point  
18 out what area of that cartridge is known  
19 as the casing area?

20 A That is the larger brass portion which holds  
21 the bullet.

22 Q I believe you said when you tested the casing  
23 in your opinion the casing was fired from  
24 that particular rifle you were examining  
25 at that time, is that correct, sir?

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A Yes, sir, all three of the casings, cartridge cases.

Q You tested all three of the cartridge cases and they were all fired from that particular rifle?

A Yes, sir.

Q From your examination, Mr. Frazier, would you tell the Gentlemen of the Jury whether or not those three cartridge cases having been fired from that rifle, whether or not they were fired on November 22, 1963, October 22, 1963, or September 22, 1963?

A I have no way of knowing when they were fired.

Q In regard to Commission Exhibit 399, the pellet that you examined, I believe it was your testimony that particular pellet was fired from the rifle you examined, is that also correct?

A Yes, it is.

Q Are you able to tell us when that particular bullet may have been fired from that Mannlicher-Carcano rifle, whether on November 22nd or any other date in 1963?

A I have no information as to that.

1 Q During your various tests and examinations,  
2 did you have an occasion to weigh the  
3 pellet of a 6.5 millimeter Mannlicher-  
4 Carcano bullet?

5 A I weighed several cartridges of that type, yes.

6 Q Can you tell us what weight you arrived at, sir,  
7 in those you weighed?

8 A The weight varied around 161 grains. It may be  
9 half a grain above or half a grain below.  
10 It averaged 161 grains.

11 Q How many of these pellets did you weigh?

12 A I only have notes here of three, as I recall  
13 I weighed more of them.

14 Q Can you give us the three weights in your notes?

15 A 160.85, 161.5, 161.1.

16 Q Also during your various tests and examinations,  
17 Mr. Frazier, did you have an occasion to  
18 weigh Commission Exhibit 399, or the pellet  
19 you had in your possession?

20 A Yes, sir.

21 Q Can you give me the weight of the pellet at the  
22 time you examined it?

23 A 158.6 grains.

24 MR. OSER:

25 At this time the State wishes to offer,

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introduce and file into evidence,  
that which has been marked as S-66  
for the purpose of identification.

MR. DYMOND:

No objection.

THE COURT:

Let it be received.  
(Whereupon, the document offered by counsel was  
received into evidence.)

MR. OSER:

I ask to display this to the Jury before  
I proceed.

THE COURT:

They may be shown.

BY MR. OSER:

Q How many pieces of pellet or fragments of  
pellet did you have in your possession  
at the time you were conducting these  
tests, do you recall?

A I believe there were nine.

Q Can you give me the weights of those individual  
pieces?

A The first one I referred to as Exhibit 399, the  
weight was 158.6 grains. Another one, this  
is one of the jacket particles that had  
lead in it, weighed 44.6 grains. The base  
portion of the bullet jacket weighed 21.0

1 grains. The three fragments of lead  
2 taken from the floor board in the passenger  
3 section of the limousine weighed .9 grains,  
4 .7 grains and .7 grains. The two lead  
5 particles submitted to me as having come  
6 from the President's head, weighed 1.65  
7 grains, and .15 grains. The fragments  
8 submitted as originating from Connally's  
9 arm weighed .5 grains. I believe that is  
10 all.

11 Q Mr. Frazier, am I correct in stating in the  
12 field of ballistics, when a bullet such  
13 as the 6.5 millimeter Mannlicher-Carcano  
14 is fired through a rifle, does the pellet  
15 come out with a reduction in the weight  
16 because it passes through the barrel and  
17 is rubbed against the rifling of the  
18 barrel? Might there be a loss of weight?

19 A There might possibly be a slight loss in weight,  
20 yes.

21 Q From your tests, will you tell us what was the  
22 speed you found this particular rifle to  
23 shoot? I think you said something around  
24 1,975 feet per second was the average.

25 A If I said that I was in error. Our tests

1 averaged 2,165 feet per second.

2 Q Did you also have occasion to test what the  
3 muzzle energy was as the bullet came out  
4 of the muzzle? How much force was being  
5 applied behind a pellet?

6 A No, I didn't perform any tests to determine  
7 that. I calculated that value from the  
8 muzzle velocity and bullet weight.

9 Q What was the result of your calculations?

10 A The calculated muzzle energy, and this muzzle  
11 energy term is used to express the rela-  
12 tive energy produced when comparing one  
13 bullet with another, and it is a function  
14 of the weight of the bullet and its  
15 velocity, rather the square of its velocity  
16 under gravity conditions, I calculated that  
17 muzzle energy at 1,676 foot pounds of ener-  
18 gy.

19 Q Would I be correct or incorrect in stating from  
20 your calculations that a pellet coming out  
21 of that particular gun would have been  
22 coming out at a force the equivalent of  
23 if you took a 1,676 pound ball and dropped  
24 it one foot? Would that be a safe state-  
25 ment to make?

- 1 A Yes, theoretically that would be an expression 151  
2 of that figure.
- 3 Q The particular pellet you examined, Commission  
4 Exhibit 399, would you describe that particu-  
5 lar pellet as a jacketed pellet?
- 6 A Yes, sir.
- 7 Q Would you explain what you mean by a jacketed  
8 pellet?
- 9 A The bullet consists of a copper alloy envelope,  
10 or outside layer, relatively thin copper  
11 alloy which covers a lead core, relatively  
12 soft lead core. In this Exhibit 399 the  
13 nose of the bullet has a solid jacket, and  
14 the base of the bullet is open or exposed  
15 and the core is inserted from the base up  
16 into this copper jacket to form the bullet  
17 by the manufacturer.
- 18 Q In the particular 399 exhibit, were you able to  
19 ascertain whether or not any of the copper  
20 jacketing was missing?
- 21 A In my opinion there was no jacketing missing,  
22 no discernible amount of jacket missing.
- 23 Q As a ballistics expert, Mr. Prazier, what, in  
24 your opinion, if such a pellet as Exhibit  
25 399 is shot, and during the shooting of



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this particular pellet, during its travel what could possibly remove the copper jacketing in order for the lead contained therein to be deposited into a particular target?

A The bullet would have to strike some object with sufficient force to rupture the jacket either from striking head-on or if it were tumbling the striking of the side, or the other alternative would be if the bullet tumbled in flight and wound up in a base-first attitude, then the lead would be exposed at the point of impact.

Q In Commission Exhibit 399, you found the copper jacketing intact, I believe you said?

A Yes.

NO HIATUS HERE.

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1 Q Were you able to ascertain from Commission  
2 Exhibit 399 whether any parts of the  
3 particular pellet were missing?

4 A There very easily could have been. I couldn't  
5 say how much.

6 Q Did you remove any of the parts or any scrapings  
7 from Exhibit 399 to run any particular  
8 tests?

9 A Yes, there were both particles of copper and  
10 lead base removed for a spectrographic  
11 analysis.

12 Q From what area did you remove the copper alloy  
13 for your spectrographic analysis?

14 A From near the rounded nose portion.

15 Q Were you able to ascertain from your examination  
16 -- from a spectrographic analysis or any  
17 other tests of 399 -- whether there was  
18 any blood or flesh or fabric contained  
19 on Exhibit 399?

20 A There was not. When I examined this bullet it  
21 was relatively clean.

22 Q Can you tell us when you got Commission Exhibit  
23 399 in your possession?

24 A I don't seem to be able to find that figure.  
25 From memory I would say Exhibit 399 was

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received at about 6:30 p.m. on November  
22, 1963.

Q Approximately some six hours after the  
President was killed you came into pos-  
session of it, if your recollection is  
correct?

A Yes, sir, that is about correct.

Q I now show you that which has been marked for  
the purpose of identification as S-65.  
I ask you whether or not you have ever  
seen what is contained in this photograph  
as being similar to something you have  
seen before during your investigation of  
this case?

A Yes, sir, it is similar to something I have  
seen in a photographic way and also as  
physical evidence.

MR. OSER:

At this time the State wishes to offer,  
introduce and file into evidence that  
which is marked as S-65 for the  
purpose of identification.

MR. DYMOND:

Same objection.

THE COURT:

1 Same ruling.

2 MR. DYMOND:

3 Same bill of exception except the Exhibit  
4 will be numbered S-65.

5 (Whereupon the document offered  
6 by counsel was received into  
7 evidence.)

8 BY MR. OSER:

9 Q Mr. Frazier, can you tell the gentlemen of the  
10 Jury and The Court, where you have seen  
11 a physical piece of evidence similar to  
12 that which is depicted in the right-hand  
13 half of State Exhibit 65?

14 A In the F.E.I. Laboratory.

15 Q Can you tell me, Mr. Frazier, whether or not  
16 during the examination and investigation  
17 that you were assisting in, whether or not  
18 you had an occasion to view a pellet of  
19 a 6.5 millimeter Mannlicher-Carcano that  
20 had been fired into a wrist area and the  
21 resulting effects to this pellet?

22 A I don't recall ever seeing that pellet in that  
23 connection. When I saw this pellet it was  
24 delivered to me by the President's  
25 Commission for the purpose of photographing

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1           it. I had all of the Commission's  
2           exhibits photographed in which we had  
3           any interest, and made special photographs  
4           for the Commission of those items sub-  
5           mitted by other individuals than the  
6           F.B.I., and that is the only occasion I  
7           recall seeing a pellet of that type.

8       Q     Mr. Frazier, during your career in the area  
9           and field of ballistics, have you had  
10          occasion to see a pellet that has struck  
11          the wrist area of an individual?

12       A     Not to my knowledge.

13       Q     Have you had occasion to see a pellet that has  
14          struck a rib and a wrist of an individual?

15       A     Not to my knowledge.

16       Q     What is your expert opinion, Mr. Frazier, from  
17          your specialty in ballistics, as to what  
18          the condition of a pellet that strikes  
19          a rib and a wrist would be?

20       A     That would depend on the type of ammunition  
21          being used. It would also depend on the  
22          hardness of the bone, the portion of the  
23          rib which was contacted, the type of  
24          bone in the wrist which was struck, and  
25          various other factors such as the

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1 . . . . . velocity of the bullet and so on. 165

2 Q I believe you said before in answer to one of  
3 Mr. Dymond's questions under Direct  
4 Examination, that from your investigation  
5 you found nothing inconsistent with a  
6 bullet being fired from the sixth floor  
7 of the Texas School Book Depository  
8 Building and going through President  
9 Kennedy and Governor Connally, is that  
10 correct, sir?

11 A Yes, sir, I believe I did testify to that.

12 Q I believe you also testified that in examining  
13 the Governor's clothes, that the type of  
14 hole you found in the Governor's coat was  
15 an irregular type of hole. Am I correct  
16 in stating that?

17 A No, I don't recall I testified to that with  
18 reference to the coat. With reference to  
19 the shirt I did.

20 Q What type of hole did you find in the  
21 Governor's coat?

22 A There was a hole approximately 1/4 inch in  
23 width and slightly elongated, that is  
24 oval in shape, in the back of the  
25 Governor's coat, about 1-1/8 inches in

1 from the sleeve seam, and this had  
2 slightly torn edges. Beyond that it had  
3 no physical characteristics of value to  
4 me.

5 Q And the hole in the Governor's shirt, I believe  
6 you testified you examined his coat cuff  
7 area, the sleeve of his cuff?

8 A Yes, sir.

9 Q Was that a ragged type hole?

10 A In the shirt it was, yes, particularly in the  
11 bottom side. The top side was not  
12 excessively ragged.

13 Q In referring to State Exhibit 62, the lower  
14 right-hand corner, Mr. Frazier, the area  
15 of the front of President Kennedy's shirt  
16 that you have circled in red, the hole  
17 area in the front of President Kennedy's  
18 shirt, can you tell us whether that was  
19 an irregular type of hole in the shirt  
20 at that point?

21 A No. I would say it was fairly regular rather  
22 than being irregular. It was an elongated  
23 slit in the cloth. It didn't have side  
24 tears coming out from the slit.

25 Q What type of hole was in President Kennedy's

shirt in the back?

1  
2 A That was a regular round hole approximately  
3 1/4 inch in diameter.

4 Q And the hole was about the same in the coat  
5 also at the back, is that right?

6 A Yes, sir.

7 Q If an individual would shoot a 6.5 millimeter  
8 Mannlicher-Carcano rifle carrying an  
9 average velocity of 2,165 feet per second,  
10 packing a force of approximately 1,676  
11 foot pounds, and this particular pellet  
12 hits one person in the back, as you found  
13 in President Kennedy's back, his shirt  
14 and coat, exits the shirt in the area  
15 where you found the slit and goes into  
16 another individual where you found the  
17 holes in the Governor's back of his coat  
18 and shirt and sleeve, and the sleeve of  
19 his shirt, and remains intact as in  
20 399, can you explain for us why there  
21 would be the slit-type of hole in the  
22 shirt and not the regular round hole as  
23 you found it as it went into his back,  
24 and why there would be the ragged hole  
25 in the sleeve of his shirt and not a round



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type of hole if the pellet remains intact,  
as Commission Exhibit 399?

A Are you speaking of the Governor's clothing  
now?

A I am speaking of both the President's clothing  
and --

MR. DYMOND:

We object. There are a number of questions  
there. We ask the question be  
divided up.

MR. OSER:

The witness can answer that question.

MR. DYMOND:

If you have the question read back you  
will see how impossible it is to  
answer.

THE COURT:

Read the question back.

THE REPORTER:

Question: "If an individual would shoot  
a 6.5 millimeter Mannlicher-Carcano  
rifle carrying an average velocity of  
2,165 feet per second, packing a  
force of approximately 1,676 foot  
pounds, and this particular pellet

1 hits one person in the back, as you 169  
2 found in President Kennedy's back,  
3 his shirt and coat, exits the shirt  
4 in the area where you found the slit  
5 and goes into another individual where  
6 you found the holes in the Governor's  
7 back of his coat and shirt and sleeve  
8 and the sleeve of his shirt, and  
9 remains intact as in 399, can you  
10 explain for us why there would be the  
11 slit-type of hole in the shirt and  
12 not the regular round hole as you  
13 found it as it went into his back,  
14 and why there would be the ragged  
15 hole in the sleeve of his shirt and  
16 not a round type of hole if the  
17 pellet remains intact as  
18 Commission Exhibit 399?"

19 MR. DYMOND:

20 You are speaking there of two people and  
21 one shirt.

22 THE COURT:

23 I didn't understand it that way. I think  
24 the question can be answered, if you  
25 know how to answer it, Mr. Frazier.

1 THE WITNESS:

2 With reference to the slit-type hole in  
3 the shirt as compared to the round  
4 hole in the back, this often occurs  
5 because there is no substance backing  
6 up the shirt at the exit point,  
7 whereas at the entrance point the  
8 person's body backs up the garment  
9 and causes a round hole. On the  
10 exit side, however, the shirt tends  
11 to be carried away from the victim  
12 and the fibers break along the weak-  
13 est part of them. In my opinion the  
14 slit-type hole in the front of the  
15 shirt is because the shirt has less  
16 strength in a vertical direction  
17 causing it to tear more rapidly in  
18 the vertical direction.

19 With reference to a hole in the  
20 Governor's sleeve, in his shirt,  
21 this could be due to a number of  
22 factors. This bullet apparently  
23 passed through the sleeve of the  
24 Governor's coat. At that point it  
25 may have removed considerable cloth

1 material from that coat. It could have  
2 carried that through into the shirt  
3 and slightly enlarging and tearing  
4 the shirt on the sleeve. A second  
5 factor is that by the time under this  
6 hypothetical situation this bullet  
7 had passed through the President and  
8 through Governor Connally, its  
9 velocity would be gradually reduced,  
10 and in fact the bullet may have been  
11 tumbling end over end at that time,  
12 in which case if it struck partially  
13 sideways it would leave an enlarged  
14 hole.

15 BY MR. OSER:

16 Q From your examination of 399, can you tell us  
17 whether or not you found any type of  
18 fabric contained on any part of this  
19 exhibit which you examined?

20 A No, sir, I did not.

21 Q Heretofore, Mr. Frazier, in speaking about the  
22 fact if you line up President Kennedy and  
23 Governor Connally where one bullet passed  
24 through both of these men at the particular  
25 time, can you show us the relative position

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from your examination that President Kennedy had to be in from knowing where the holes were in the coat and shirt and nick in the tie in order for this to happen?

A I could show you with reference to where the hole was in the President's body but not necessarily where it was with reference to his coat, because his coat could have been hunched up at the back and not be anywhere near the same position as the hole in his body.

When you sit with your coat in a car it wrinkles at the collar and the back, and a bullet passing through that area, when the coat straightens down, could be several inches lower than the point of impact in the back of the individual. In our reconstruction in Dallas, the hole was marked on the President's body according to medical testimony and not according to his clothing. In that instance it was located just at the base of the neck, 5 inches below the mastoid area of the right area, and 5 inches in from the shoulder. There is no photograph here which represents

*The coat on the stand  
in was not "hunched up"*

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that. I could show you on the photograph  
Exhibit 63, which shows the back of the  
President, I could indicate the spot  
which was marked as the point of impact  
on the President's body.

NO HIATUS HERE

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1 Q Are you referring to this particular exhibit,  
2 Mr. Frazier?  
3 A Yes.  
4 Q Would you step down, Mr. Frazier, and show us  
5 the area to which you are referring?  
6 A The spot was marked on the President's body  
7 about 5 inches down from the right mastoid  
8 area at the base of the neck. In the back  
9 or at the base of the neck, and 5 inches  
10 in, which would put the bullet impact on  
11 this photograph about where I am indicat-  
12 ing here, about 4 inches above and 3  
13 inches to the right of the white spot on  
14 the back of the coat.  
15 Q Mr. Frazier, you said all this was done, this  
16 particular area was marked because of the  
17 fact the President's coat might have been  
18 rucked up or creased in some way, is that  
19 what you are saying?  
20 A Yes, sir.  
21 Q Were you able to view any photographs during  
22 your investigation that showed the  
23 President's coat was puckered up?  
24 A I don't recall if that detail was shown or  
25 not.

1 Q Did you see it?

2 A I don't recall whether I did or not.

3 Q Didn't you all take into account that  
4 Governor Connally's coat might have been  
5 puckered up also?

6 A Sir, I didn't take any of this into account.  
7 This was decided by the Commission, not  
8 by me.

9 Q You were there to do just what the Commission  
10 asked you to do, is that right, sir?

11 A I didn't catch that question.

12 Q You were just there doing what the Commission  
13 asked you to do?

14 A Yes, sir, assisting them.

15 Q Before, Mr. Frazier, you demonstrated to  
16 Mr. Dymond in regard to the area of one  
17 bullet passing through the President and  
18 the Governor, that the President had to be  
19 in some position of bending over or down  
20 or forward, is that correct? Did you give  
21 some testimony to that effect?

22 A No, sir.

23 Q You are saying the President could be seated  
24 erect and that bullet still could have  
25 passed through both President Kennedy and



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Governor Connally?

A The question was asked, and my answer in that regard was, there was a time during this reenactment, according to the Zapruder film, at which the President's stand-in and Governor Connally's stand-in were in line, the path of the bullet through the President's body, was generally in line with the impact area on the back of Governor Connally, and the angle of the bullet through the President's body both horizontally and vertically coincided with the angle of the projectile, through Governor Connally's body both horizontally and vertically so it was possible for this event to have occurred. I didn't testify it did actually occur.

Q What frame of the Zapruder film could this have happened in?

A From Frame 207 to a few frames possibly after Frame 225.

Q Can you see the President and Governor Connally between Frame 207 up to Frame 223?

A Yes, sir. They have cleared the tree as I saw

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them from the sixth floor in the reenactment.

Q I'm not asking you about the reenactment, I am asking you if you can see them in the Zapruder film?

A I don't know what the frame numbers were. I didn't make a note of those particular frame numbers with reference to my study of the film.

Q You don't recall which frame numbers of the Zapruder film shows President Kennedy and the Governor between frame 207 and 223?

A No, I don't know what the film shows with reference to the President and Governor Connally.

Q If I tell you this particular area, from where Mr. Zapruder was standing, that the presidential limousine was behind a sign and you couldn't see the President or the Governor at this particular time, would that refresh your memory as to what took place during that span in the Zapruder film?

MR. DYKOND:

This is irrelevant. I don't think anyone

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has suggested Mr. Zapruder shot the President.

THE COURT:

I understand the question. I overrule the objection.

THE WITNESS:

According to my recollection from what I saw from the sixth floor window, and as the car was placed from the Zapruder film and other films, from what I saw there was a clear air line view from the window to the car during these various frames. I didn't make a detailed study and place the car in the street.

BY MR. OSER:

Q Who placed the bodies in their position during the reconstruction?

A They were placed according to the Warren Commission members' instructions.

Q Mr. Frazier, you said before you were not using the President's limousine, you were using a Cadillac, and you calculated a 10 inch difference between the car you were using and the actual car in which the President

1 was shot. How did you accomplish this  
2 10 inch difference? What did you do to  
3 calculate for this 10-inch difference?

4 A The mark on the back of the President at the  
5 base of his neck was marked and in plain  
6 view from the window. I looked through  
7 the telescopic sight at a ruler held on  
8 his back. I had them move the ruler to  
9 the 10-inch distance and mark another spot  
10 down on the automobile.

11 Q Isn't it a fact, Mr. Frazier, you had stand-ins  
12 that were acting for President Kennedy  
13 sitting on some blankets in that car?

14 A Only the Presidential stand-in was sitting on  
15 a blanket because the rear seat in the  
16 Cadillac was considerably lower with  
17 reference to the jump seat than the rear  
18 seat in the Lincoln or the car in which  
19 the President was assassinated.

20 Q As an expert in the field of this type of in-  
21 vestigation, can you tell me why you all  
22 didn't use the President's car and used  
23 another car when you had to calculate  
24 some 10 inches and sit one person on a  
25 blanket?

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MR. DYMOND:

We object on the ground it is repetitious  
and argumentative.

THE COURT:

I think you have covered that subject  
matter.

MR. OSER:

Your Honor, can we take a coffee break?  
I'm going to a new area now.

THE COURT:

Very well, we will take a 10-minute  
recess.

(SHORT RECESS.)

NO HIATUS HERE

1 AFTER THE RECESS:

2 THE COURT:

3 Are the State and the Defense ready to  
4 proceed?

5 MR. DYMOND:

6 We are ready.

7 MR. OSER:

8 Yes, Your Honor.

9 BY MR. OSER:

10 Q Mr. Frazier, is it correct from your testimony,  
11 sir, that when you examined the coat, from  
12 the back of President Kennedy's shirt and  
13 his coat, that you found traces of copper  
14 on the fibers in the area of the hole?

15 A There were, yes.

16 Q Did you find any such copper traces on the  
17 front slits or the tie area of President  
18 Kennedy's shirt and tie?

19 A No, sir.

20 Q Now, pursuant to your investigation, did you  
21 have occasion to examine a piece of con-  
22 crete removed from the curbing in Dealey  
23 Plaza, to ascertain whether or not this was  
24 a nick from a bullet containing any  
25 metallic substance?

1 A Yes, sir.

2 Q And did your examination of this piece of  
3 concrete reveal any metallic substance  
4 thereon?

5 A Yes, there was a slight smear on the -- on this  
6 object, which purportedly was a piece of  
7 curbing.

8 Q Was there any copper alloy or any metallic  
9 consistency or chemical analysis of copper  
10 on this piece of curbing?

11 A No, sir.

12 Q Do you know, sir, where this curbing was removed  
13 from?

14 A I do not.

15 Q Mr. Frazier, from your examination in Dealey  
16 Plaza, from reviewing what you reviewed,  
17 are you able to ascertain as to what the  
18 angle, the downward angle of entry that a  
19 bullet may have made into the back of  
20 President Kennedy?

21 A At certain points, yes.

22 Q At what point did you first calculate this,  
23 sir, and what was the angle?

24 A I did not calculate it. As I recall, a surveyor  
25 placed a transit on the street and read the

1                   angle with his transit. He wrote these  
2                   figures down, I did not write them down.

3   Q   Well, do you know the angle at approximately  
4                   Frames 223 or 224?

5   A   I could approximate it but I don't know the  
6                   angle.

7   Q   Would you give me that approximation?

8   A   Between 17 and 20 degrees, in that neighborhood.

9   Q   And when you were conducting your examination  
10                  and arriving at the results that you  
11                  arrived at upon the instructions of the  
12                  Warren Commission, which you were doing,  
13                  did you have available any information  
14                  from two agents, one by the name of  
15                  O'Neill and one by the name of Siebert,  
16                  who were present at the autopsy and stated  
17                  that the angle of entry was between 45  
18                  and 60 degrees into the President's back?  
19                  Did you have that available at that time?

20   A   No, I don't recall that information.

21   Q   Did you have available, sir, during your in-  
22                  vestigation the fact that Agents Siebert  
23                  and O'Neill (stated) that at the time of  
24                  the autopsy the opening in the President's  
25                  back, the hole in the President's back,



1           could be felt by the autopsy operator  
2           with the tip of his finger and that it  
3           wasn't a through-and-through gunshot  
4           wound? Did you have that available, sir?

5   A    I don't understand.

6           MR. DYMOND:

7           If Your Honor please, we object. There is  
8           no evidence to this effect at all,  
9           that there is such a report even.  
10          Counsel is referring to a report here.  
11          We don't even know whether such a re-  
12          port exists, and he is purportedly  
13          quoting from it.

14          MR. OSER:

15          I am asking if he had it at his disposal,  
16          the quoted --

17          MR. DYMOND:

18          He is asking whether he had a report to  
19          that effect from certain named agents.

20          MR. OSER:

21          As I say, we don't --

22          THE COURT:

23          I think to be fair with the witness, in-  
24          stead of quoting from any report you  
25          should ask him first did he have any

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reports available to him; if he says  
yes, then you can go into specific  
reports, but, if he didn't have any  
of them available, then you shouldn't  
quote from five or six different --

MR. OSER:

All right.

BY MR. OSER:

Q Did you have the report of Special Agents  
Siebert and O'Neill available to you during  
your entire investigation?

A No, sir.

Q Now, Mr. Frazier, before you testified in front  
of the Warren Commission, and I ask you  
whether or not you made the particular  
statement in front of the Warren Commission  
with regard to whether or not one bullet  
could have passed through President Kennedy  
and Governor Connally between Frames 207  
and 225. I ask you whether or not you made  
this particular statement:

"I myself don't have any technical evidence  
which would permit me to say one way or  
the other, in other words, which would sup-  
port it as far as my rendering an opinion as

1 an expert. I would say, I would certainly  
2 say it was possible but I don't say it  
3 probably occurred because I don't have  
4 the evidence on which to base a statement  
5 like that."

6 Did you make that statement in front of the  
7 Warren Commission in regards to one bullet  
8 passing through the President and the  
9 Governor at Frames 207 to 225?

10 A (Referring to volume) Page 172. That is part  
11 of the discussion concerning a hypothetical  
12 question which was asked me, and I did make  
13 that statement with regard to those assump-  
14 tions they asked me to make.

15 MR. OSER:

16 That is all.

17 MR. DYMOND:

18 Is that all, you said?

19 MR. OSER:

20 Yes, sir.

21 REDIRECT EXAMINATION

22 BY MR. DYMOND:

23 Q Mr. Frazier, with reference to the piece of  
24 material purporting to be a piece of curbing  
25 on which you say that you found lead smears,

1 was this lead smear consistent in  
2 metallic composition with the cartridge  
3 particles which you examined?

4 A I don't have that information available.

5 Q You do not?

6 A No, sir.

7 Q Now, Mr. Frazier, have the opinions which you  
8 rendered in this case been your honest  
9 objective opinions, or have they been in-  
10 fluenced in any way by any supposed desires  
11 of the Warren Commission or anybody else?

12 A No, sir, absolutely not.

13 Q Are these your honest professional opinions?

14 A Yes, sir.

15 Q Now referring to State Exhibit No. 34, Mr.

16 Frazier, you were asked on direct examina-  
17 tion whether or not there would have been  
18 a clear shot at the President's vehicle  
19 while it was going on Houston Street in the  
20 direction of the School Book Depository.

21 When the vehicle was going in that direc-  
22 tion in the reenactment, would anyone have  
23 been sitting between President Kennedy and  
24 the School Book Depository?

25 MR. ALCOCK:

1 Your Honor, we are going to object, be-  
2 cause the witness's testimony was  
3 that the vehicle never went in that  
4 direction on the reenactment, it only  
5 went down Elm Street, he said it did  
6 not approach Elm and Houston.

7 MR. DYMOND:

8 If that is so, I will change the form of  
9 the question.

10 THE COURT:

11 Mr. Dymond, may I suggest that you use the  
12 microphone. Then if you turn away  
13 from the court reporter, she will be  
14 able to hear you.

15 BY MR. DYMOND:

16 Q Referring to your answer on direct, that there  
17 would have been a clear shot at the  
18 President's vehicle from the School Book  
19 Depository as it was going on Houston  
20 Street toward the Depository, at that time  
21 would there have been anything between  
22 President Kennedy and the School Book De-  
23 pository in the line of fire?

24 A Yes, sir, there would, two things, three things:  
25 The windshield of the automobile, Special

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Agent Delman of the Secret Service, and  
Governor Connally. However, with the  
elevation of the School Book Depository  
it may have been possible to fire over  
these individuals without hitting them,  
but I did not make that determination nor  
did we reconstruct that part of the journey

NO HIATUS HERE.

1 Q Now, with reference to the similarity in the  
2 gun, which is in evidence here as State  
3 Exhibit 18, and the gun which was examined  
4 by you, after having examined both of  
5 these weapons, Mr. Frazier, is there any  
6 difference in the mechanical operation of  
7 the two weapons, that is, the manner in  
8 which --

9 A Yes, sir, yes, sir, I would say this weapon  
10 operates more difficultly than the one  
11 which I examined in the laboratory. It  
12 is more difficult to open the bolt and  
13 draw the bolt back and to close the bolt.

14 Q Now with reference to the test which you  
15 performed on the speed and accuracy of  
16 firing the rifle which you examined, as  
17 an expert in the field of ballistics  
18 would you say that practice with a  
19 particular rifle would be helpful in  
20 increasing the speed and accuracy of such  
21 firing?

22 A Yes, it would.

23 Q Now in connection with your reenactment of the  
24 assassination scene with the aid of the  
25 Zapruder film, which is State-37, prior

1 to the time that the Presidential vehicle  
2 got to the position indicated at Frame 13,  
3 was there a clear shot at the vehicle?

4 A Yes, sir. At any stage back through this film,  
5 through all the frames back to Frame No.  
6 207 as the car was placed on the street  
7 by the Commission with reference to the  
8 film, with the assistance of  
9 Special Agent Shaneyfelt, and beyond  
10 207 the car would be underneath a live  
11 oak tree growing along the street. At  
12 that point you could see the individuals  
13 in the car through the tree, but you could  
14 not clearly see them, that is, see their  
15 entire outlines.

16 Q For approximately how many frames before Frame  
17 313 was there sufficient clearing to  
18 enable a person to draw a bead on  
19 President Kennedy from the sixth floor  
20 Depository window?

21 A (Computing) I would say approximately 106  
22 frames.

23 Q And approximately what length of time would  
24 those 100 frames consume, Mr. Frazier?

25 A Slightly over six seconds.



1 Q Would that be sufficient time to draw a bead  
2 on President Kennedy before he reached  
3 the position indicated by frame 313?

4 A Yes, sir.

5 Q Now with reference to the telescopic sight on  
6 the gun which you examined, do you know of  
7 your own knowledge whether that sight was  
8 loose and not firmly secured to the gun  
9 at the time that the gun was originally  
10 recovered, before it was turned over to  
11 you?

12 A No, sir, I have no knowledge of the gun prior  
13 to the time when I received it.

14 Q Now, Mr. Frazier, would it have been within the  
15 scope of your expertise to examine and  
16 analyze any particles of flesh or blood  
17 which might have been on Exhibit 399 when  
18 it was turned over to you?

19 A No, sir, I do not make that type of examination  
20 in the laboratory.

21 Q (Indicating photograph) Mr. Frazier, referring  
22 to the exhibit marked for identification  
23 "State-63," the point which was marked on  
24 the back of the stand-in for President  
25 Kennedy, was that estimated or was it taken

1 from the point of the wound on President  
2 Kennedy's remains?

3 A From the point of the wound by measurement  
4 taken at the time of the autopsy.

5 MR. DYMOND:

6 That is all, sir.

7 RE-CROSS-EXAMINATION

8 BY MR. OSER:

9 Q Mr. Frazier, can you tell us whether or not  
10 anybody in the F.B.I., or the Federal  
11 Bureau of Investigation, made any tests  
12 on 399, and whether or not it was ascer-  
13 tained whether there was any blood or  
14 flesh on that particular pellet?

15 A Yes, sir, I can. There was no such test. I  
16 saw no debris on this bullet and therefore  
17 I decided there was no need for any test  
18 since there was nothing on it.

19 Q Not even microscopically you didn't examine  
20 this bullet?

21 A There was not anything but a slight stain which  
22 would be insufficient for any examination.

23 Q Mr. Frazier, you said that the shot from the  
24 sixth floor was a relatively easy shot to  
25 hit President Kennedy while he proceeded

1 on Elm Street. Can you name anybody in  
2 the Federal Bureau of Investigation or  
3 any expert rifleman under the Bureau's  
4 direction who could accomplish the same  
5 feat that is alleged to have been accom-  
6 plished, by the Warren Commission, namely,  
7 that the rifleman was in the sixth floor  
8 some 60 feet off of ground level at a  
9 distance of 265 feet away at frame 313,  
10 and with a moving target?

11 MR. DYMOND:

12 If the Court please, we object to this  
13 on the grounds, number one, that it  
14 is argumentative, number two, it is  
15 not proper re-cross-examination.  
16 Nothing was brought out on re-direct  
17 which permits such a question as  
18 this.

19 THE COURT:

20 You needn't argue, Mr. Oser, it is within  
21 my discretion to permit it, and I  
22 will overrule your objection.

23 THE WITNESS:

24 I know of no such tests or individuals.

25 MR. OSER:

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That is all.

MR. DYMOND:

That is it.

(Witness excused.)


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C E R T I F I C A T E

I, the undersigned, Helen R. Dietrich, do hereby certify:

That the above and foregoing (195 pages of typewritten matter) is a true and correct transcription of the stenographic notes of the proceedings had herein, the same having been taken down by Charles A. Noyrey, Clifford Jefferson, and the undersigned, and transcribed under our supervision, on the day and date hereinbefore noted, before the Criminal District Court, Parish of Orleans, State of Louisiana, in the matter of the State of Louisiana vs. Clay L. Shaw, 198-059 1426 (30) Section C on the 21st and 22nd days of February, 1969, before the Honorable Edward A. Haggerty, Jr., Judge, Section "C", being the testimony of Robert A. Frazier.

New Orleans, Louisiana, this 23rd day of February, 1969.

  
HELEN R. DIETRICH,  
REPORTER