

February 3, 1964

Honorable J. Lee Rankin
General Counsel
The President's Commission
200 Maryland Avenue, N. E.
Washington, D. C.

Dear Mr. Rankin:

At the request of members of your staff the FBI Laboratory has made a further study of the film speed of the camera used by Mr. Abraham Zapruder in filming the eight millimeter motion picture of the President's assassination. You have previously been furnished the results of the Laboratory examination of this camera which places the film speed at 18 1/3 frames per second. The Laboratory was requested to establish, if possible, the variation between the film speed of the camera when the drive spring is fully wound and when the spring is almost run down.

This study has been made by checking the film speed of the Zapruder camera at ten second intervals throughout the full running time of a fully wound camera. Several checks were made on a full roll of film and it was found that the film speed of the camera when fully wound runs at an average speed of from 18.0 to 18.1 frames per second (fps) for the first ten seconds. It gradually increases to 18.3 to 18.5 fps for the next twenty seconds, then gradually decreases slightly to 18.1 fps for ten seconds before the final twenty seconds that run at an average speed of 17.6 to 17.9 frames per second. Mr. Zapruder has stated that the camera was fully wound when he started filming the President's motorcade. Since all of Mr. Zapruder's assassination film was exposed well within the first half of time the camera will run on one winding, the run-down film speed should not be considered in the calculations. Therefore, the above figures result in our previous average frames per second speed for the assassination film of 18 1/3 or 18.3 frames per second.

Sincerely yours,

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