

Evaluating Claims of Zapruder Film Alteration

Supplement to [Part 1](#)

Several Alteration Alternatives

The following alternatives represent valid approaches to alteration. However, we must analyze how they hold up to the alteration challenge.

Alternative A. Using a B&H Model 414PD as the Capture Camera

I concede that it would be technically feasible to use the Bell & Howell 414PD camera as the capture camera in an optical-printing/animation-stand operation. This is the approach John Costella champions. It would bypass one of the transition issues mentioned in the main article, but it would present horrendous obstacles and timing issues.

The major problem is that *every* frame would require artistic work in the intersprocket area to remove all telltale B&H signature anomalies, including the “transition quirk” mentioned in the main article. Without this effort, double signatures would be quite evident in the intersprocket area. In addition, the faint images behind the preprinted branding would have to be artistically drawn without the semitransparent branding. The area in the sprocket holes would also need to be artistically extended to have any chance of avoiding visible sprocket-hole alignment issues.

There are additional issues with this approach, some of which are detailed in Zavada’s previously referenced [response to Doug Horne](#). This alternative would require a custom film gate to be manufactured or improvised, as 8mm optical-printing film gates were unavailable at the time. Modifications to the film gate would also be required to handle the intersprocket area.

The bottom line is that this approach would require months of top-level artistic talent (with rush security clearances), the construction of a custom film gate, and countless rounds of trial and error to produce a believable alteration. As I have shown in “Opportunity,” by the end of the weekend of the assassination, fifty-five key frames had already been “frozen” by NPIC and *Life*. The “dirty dupe” that Time-Life used to print the issue of *Life* that hit the newsstands on Wednesday, November 27, 1963, contains the complete sequence, including frames now missing because of subsequent Time-Life mishandling. These findings support the conclusion that *no* frames could have been removed after that weekend. Any alteration would be limited to *content changes*, and if any frames were altered, the fifty-five key frames would be exempt from such changes.

Alternative B. Using a Stock Optical Printer: Standard KII Film Used in the Capture Camera

As with Alternative A, this technique would require crafting a custom 8mm film gate that includes the intersprocket area. This alternative would also require significant artistic talent to totally change any intersprocket-area images for those frames that contained the semitransparent

branding ID, which would mean addressing around one hundred frames even if the frames themselves weren’t altered. Further, the “transition quirk” mentioned in the main article would require even more frames to be artistically addressed. Without all of the required artistry, the branding area would have easily detectable fingerprints of alteration. As with Alternative A, the sprocket holes would need to have content extended, without which there would be quite visible sprocket-hole alignment “tells” of alteration.

Alternative C. Using a Stock Optical Printer: Custom KII Film Without Branding Used in the Capture Camera

While this alternative initially seems conceptually elegant, it would still require the sprocket-hole artistry. Further, it is virtually impossible for an optical printer to achieve an undetectable frame-to-frame transition in those frames with the branding area, especially the many frames that contain a “transition quirk.” An optical printer cannot employ continuous printing and must rely on discrete frame-by-frame captures. Discrete movement simply could not achieve perfect frame-by-frame transition boundaries. With the advent of lasers and micropositioning, the transition problem could potentially be solved today on film, but certainly not using 1960s technology.

Alternative D. The Sensible Approach

If I were forced to alter the film, I would use standard optical printing with an animation stand. That approach means I would *not* attempt to reproduce the sprocket-hole area. If anyone ever questioned why there was no intersprocket imagery, a story could be invented that the original was accidentally destroyed after it was copied. This alternative would give us complete freedom to alter the film with relative ease. To the dismay of alterationists, we know with absolute certainty that this alternative wasn’t used, simply because the extant film has intersprocket imagery.

Alternative E. The Nasty Approach

A darker approach would be to “accidentally” destroy or lose the film. This would require dealing with Zapruder’s copy and any other copies, a task certainly in the wheelhouse of those in the covert world who enforce silence “or else.” As with Alternative D, we know this approach wasn’t used.