



Structural Integrity: Silver Bridge ***The Weakest Link***

Following the silver bridge collapse, it was imperative to identify the cause precisely and identify the safety-critical parts of the structure. The big problem facing the investigators was that 90% of the bridge was submerged in fast flowing river!

Jack Fowler

The next day, people came from every place, the state, the Federal Government, Ohio, West Virginia. They had crews in here, the National Guard. And they were out trying to drag and recover the...recover bodies, and they were bringing in the Core Engineer derricks, boats to start removing the steel.

Well, after they recovered bodies, they wanted to reconstruct the bridge. Um, as they pulled pieces out, they numbered them, marked them, and then they took them and laid them all out in a field, uh, to try to find the culprit, what happened, where was the...the failure.

Well, when they recovered this...the 330 eyebar, when they found two pieces, that's when they started realising that one of those must have fractured and separated or blew apart and caused the failure. So they focused on that. And I think, from the investigation, that appears to be what happened, we, that's the analysis that we received about the...the failure, and that's the one we promote and talk about here at the museum.

Narrator

Most of the material that was recovered from the scene has long gone but the museum did save at least a sample of an eyebar assembly; albeit one that has been cleaned and painted to look like new.

Pete Lewis

This is a typical eyebar joint from the Silver Bridge, which was rescued after the disaster. Um, it comprises a central pin over which the eyebars would have been pivoted, and the whole assembly is encapsulated by the very solid end caps, which themselves are attached by one-inch bolts through the...the centre of the pin. There's some interesting evidence of pitting corrosion on the surface, the bearing surfaces. This would be the bearing surface of the pin over which the, uh, eyebars would rotate, and you can, the...there...there is considerable pitting under the track of the one of the outer eyebars, and also, uh, underneath the cap, even deeper corrosion, uh, pitting caused during its lifetime on the...the bridge itself.