

RELIABLE TAKEOFFS AND FRA COMPLIANCE WITH AI

A US rail infrastructure prime contractor running 6 active sites reduced full plan-set takeoff time by 87% and intercepted 31 specs-to-plan inconsistencies before FRA inspection — across 3 agents deployed in 9 weeks.

87%

reduction in takeoff time

11 hrs

recovered per PM / week

31

FRA inconsistencies caught
pre-inspection

9 wks

audit to full production

THE CHALLENGE

Running 6 active rail sites with 140–220 plan files each and a revision every 11 days, a full plan-set takeoff took 4.5–6 hours per Project Manager, and FRA compliance checks against specs were done on a best-effort basis with no systematic cross-referencing.

THE DEPLOYMENT

Mirage deployed three agents on the contractor's existing document infrastructure: automated quantity takeoff from track plans, a consistency-checking agent cross-referencing specs against plans, and natural-language search across all project documents.

THE RESULT

Full plan-set takeoff time dropped 87%, 11 hours per week were recovered per Project Manager, and 31 specs-to-plan inconsistencies were intercepted and resolved before FRA inspection.

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The takeoff used to be the first thing I'd block three hours for after a revision drop. Now it's done before I finish my coffee.

Anonymized — illustrative deployment Project Manager, US rail infrastructure contractor