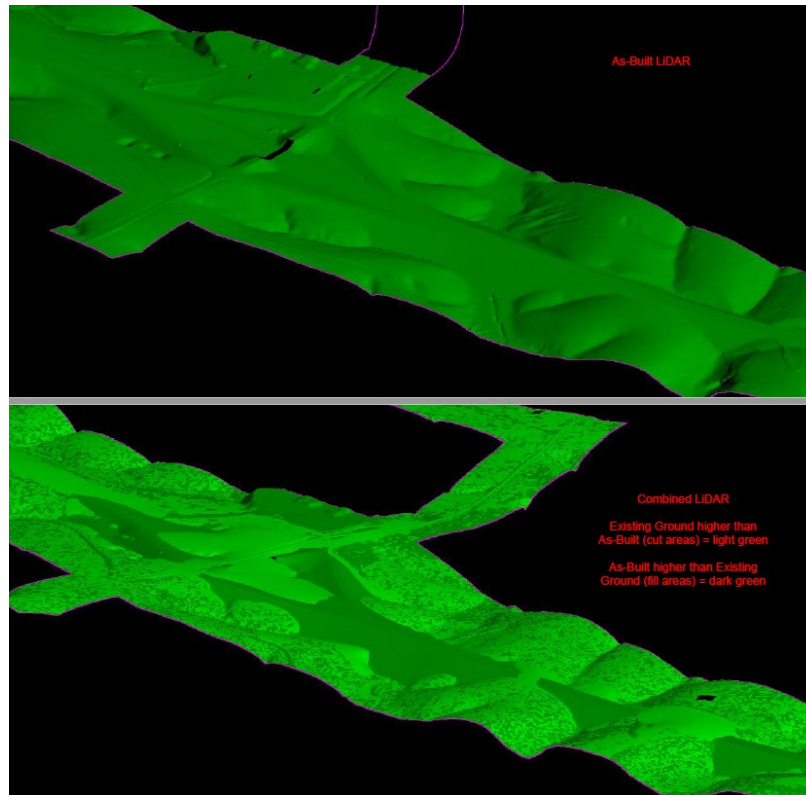




## Interstate 49 Earthwork



### Description and Benefit

This innovation was implemented to perform the final earthwork quantity calculations for the new 5-mile segment of Interstate 49 recently opened in McDonald County. Instead of using the average end area method as prescribed by the Missouri Standard Specifications for Highway Construction, we utilized a 3D terrain model volumetric comparison to compute the final earthwork quantities.

It was estimated that it would have taken a 3–4 person survey crew approximately 6–9 months to perform an as-built topographical survey following the completion of the Interstate 49 earthwork operations. It then would have taken a Revised 2021 designer another 1–2 months to generate cross sections and compute final earthwork quantities. This innovation saved time and simplified work by allowing one surveyor, with limited assistance from a designer, to complete the final earthwork quantities in approximately 2 and a half months. This innovation also saved approximately \$66,000 in salaries and freed up MoDOT staff to work on other projects.

### For More Information Contact

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