

CASE STUDY

Massachusetts Turnpike and Interstate 495

Location: Hopkinton, MA | Services Rendered: Laser Scanning & Existing Conditions Plans

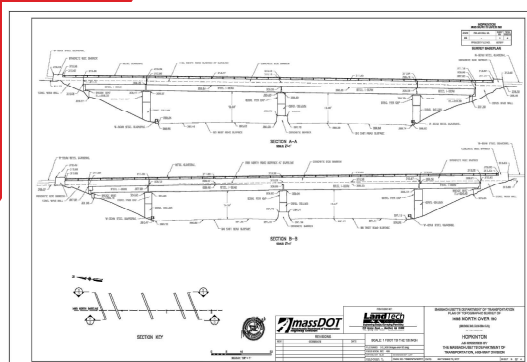
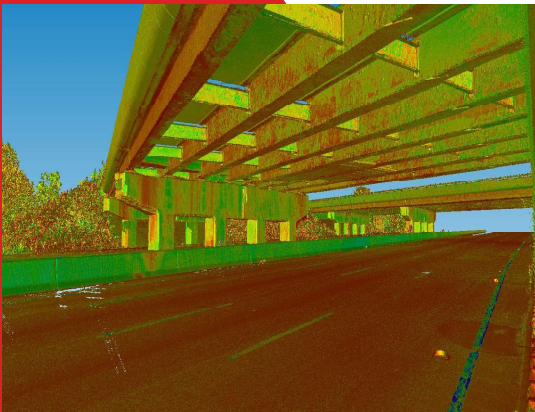


DOCUMENT

The intersection of the Massachusetts Turnpike and I-495 is one of the busiest in the state and is considered the “Crossroads of Massachusetts.” Almost half of all truck commerce passes through this interchange and its safe passage is vital to the Massachusetts economy. The high volume of traffic and outdated design prompted MassDOT to identify the intersection as a high-crash location in need of modernization to address better traffic flow and increased growth. Proposed improvements will substantially improve safety and benefit the reliable distribution of goods and services throughout the state.

DESIGN

As a member of the design team, LandTech was tasked with laser scanning and preparing existing conditions plans for 13 bridges within the intersection configuration. Rehabilitation or replacement of these bridges was necessary for the intersection improvements. With over 100,000 vehicles passing through the area every day, laser scanning was the ideal solution for capturing the existing conditions of these bridges due to the speed of data collection, the amount of data captured and the minimal impact to existing traffic. All data collection was accomplished from the breakdown lanes of the roadways with minimal lane closure. Data capture for all 13 bridges was accomplished over a period of eight days in the field. Upon completion of laser scanning, data was placed on state plan coordinate survey control and existing conditions plans were prepared of the bridges.



DEVELOP

Final AutoCAD and PDF plan files were supplied to the project team. These files form the basis for further design and eventual construction of improvement to the multiple bridges involved in the intersection as part of the nearly \$400 million infrastructure project.