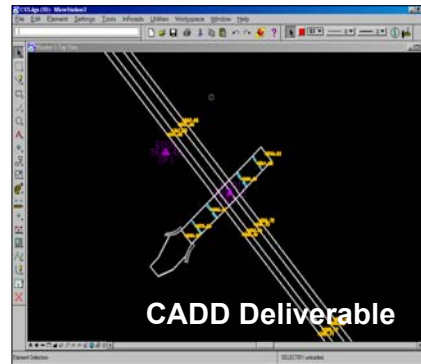
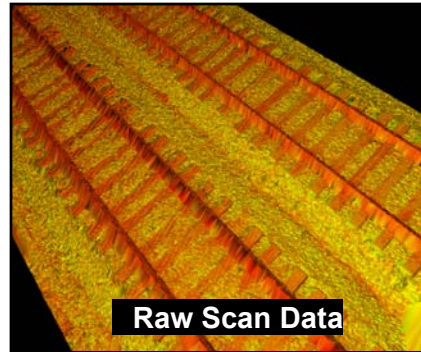


CSX Railroad at Randolph Road

GPI



3D Laser Scanning

Client/Owner: MD State Highway Administration
Project Location: Rockville, Maryland

GPI was contracted by Maryland State Highway Administration Plats & Surveys Division to provide **survey** information for 2,000' of C.S.X Railroad in a two-week delivery schedule. The purpose of the **survey** was to have accurate drawings showing the elevations of the tops of rails to determine clearances for the design and construction of a proposed traffic bridge. To access C.S.X property requires a permit, which typically takes six to eight weeks to process. The area of interest is an at-grade crossing with a busy cross street.

Through use of it's state of the art **3D Laser Scanning** technology, GPI provided as-built plans within the CSX rail right of way, without physical access to the right of way, eliminating the need for access permits and reducing project time radically. The **3D Laser Scanner** was placed outside the right of way and pointed along the rails. The resulting data file was archived for future use to prevent costly and time consuming call-backs in the event future data is needed. High accuracy **control**, which was also obtained outside the right of way, assured both accuracy and timeliness of the final product. The control was used to register the adjoining raw scans together.

The **survey** was completed without causing train interruptions or the use of flag persons and was **data collected** 100% from outside the track areas. GPI used **3D Laser Scanning** and scanned the rails providing raw data scans in 100'-200' sections at a time. The raw scan data was registered to Maryland State Plane Coordinates using **GPS** and conventional **survey** techniques. Following the **integration** and processing of the **data collected** the final **deliverable** consisting of a **MicroStation DGN** and **InRoads** DTM surface model was created depicting the tops of rails with spot elevations at intervals along the length of the project.