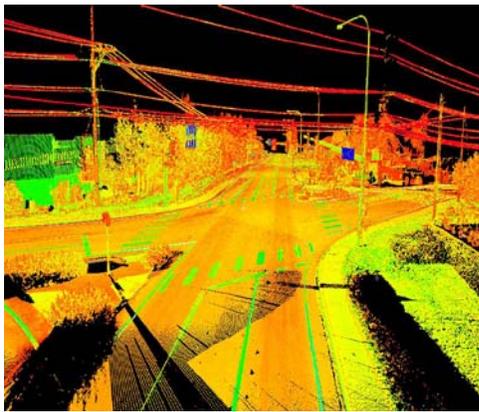




Water System Line Replacement, Whidbey Island NAS, Oak Harbor, WA; Kennedy Jenks for the US Navy

White Shield provided topographic survey and utility mapping at the intersection of SR 20 and Cemetery Road as part of a \$10.8 million American Recovery and Reinvestment Act (ARRA) design-build contract to replace the water distribution system at Naval Air Station Whidbey Island, located in Oak Harbor, Wash. This project replaced the water distribution lines on Ault Field and the Seaplane Base with 16.14 miles of new ductile iron water lines up to 18 inches in diameter. The system was designed to minimize water outages while construction occurs near the existing lines and several fragile old cast iron lines. White Shield utilized a Leica ScanStation II High Definition Scanner in conjunction with RTK GPS, and conventional ground survey techniques to provide project mapping under an extremely tight project schedule.



The intersection of SR 20 and Cemetery Road is a high volume State Highway with a combination of two travel lanes and center turn lanes in its various quadrants. The ScanStation II was used as the primary data gathering tool for this section of roadway in order to avoid project delays in permitting and traffic control. Over 1000' of roadway was mapped by a one person crew in a single day, without causing traffic disruptions or interruptions. Our survey crews collected far more data than would be practical using conventional methods from the safety of the roadway shoulder. The motoring public was protected by working at a distance from traffic so as to keep crews from becoming a visual distraction.

The image shown above is a view of the data collected at the intersection. Each point captured in the raw scan data cloud represents a single survey grade horizontal and vertical measurement. The final map product is shown below.

The use of the Laser Scanner enabled survey crews to safely provide high quality mapping services, and enabled the project to remain on schedule and budget by avoiding permit delays and the expense of traffic control.

