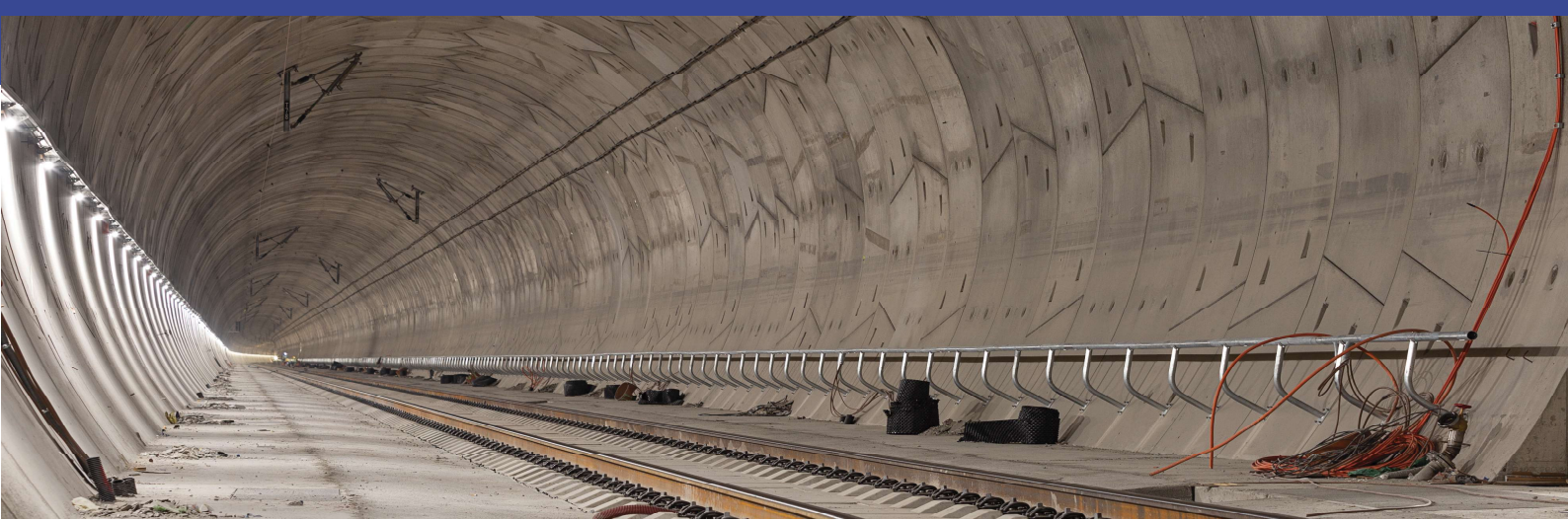


tcpTunnel

Setting Out and Surveying for Tunnels

Tunnel survey with either motorized or conventional total stations.



Project Definition

Each project is defined by the horizontal and vertical alignments, superelevations and tunnel templates, that can be converted from a CAD drawing, defined by parameters or points measured with total station.

Positioning and Orientation

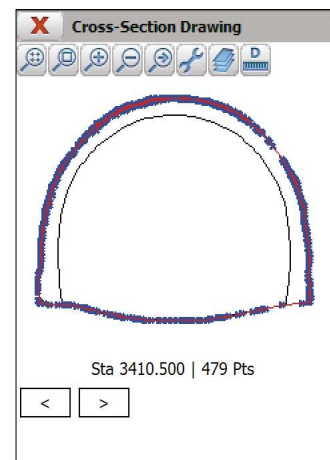
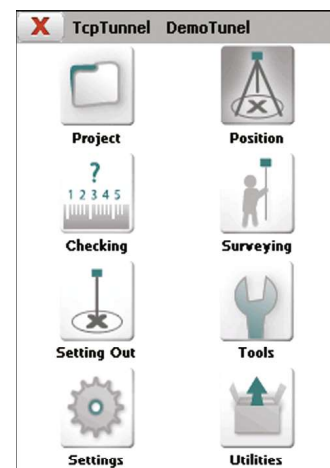
As a prior step to surveying and setting out, the station should be oriented by coordinates, angle or resection. User can select between local and UTM projected coordinates.

Cross-section Measurement

TcpTunnel performs automatic and unattended cross-section measurement for each station, defined by angle, arc length or height difference intervals. Singular points and roadbed can be measured, and exclusion areas defined as well.

Surveying

The program allows the setting out the excavation front, points of the tunnel's cross-section, road surface, bolts and points of the coordinates file. It provides information on the elevation difference compared to the theoretical point.



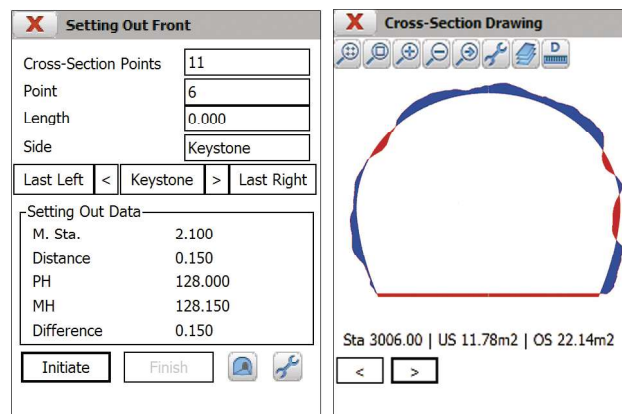


Calculation of Areas

The application allows to compare graphically theoretical and measured cross-sections along the alignment, showing in different colors the under-excavation and over-excavation areas with their values for each cross-section.

Utilities

Other available tools are point analysis over the alignment, distance and areas calculation and instrument settings. The program has full control over the total station, including the compensator, laser pointer, measurement with or without prism and battery status, which are constantly monitored.



Requirements ⁽¹⁾

Supported devices	Mobile devices with ARM processor and operating system Microsoft Windows CE/Mobile version 4 or higher.
Supported total stations	The application is compatible with different models of following brands: Geodimeter, Geomax, Leica, Nikon, Pentax, Sokkia, Spectra, Topcon, Trimble. More details on page product at our website.

(1) This information is for guidance only. More detailed information about TcpTunnel requirements at www.aplitop.com

