

Snapshots from the Sea-to-Sky . . .

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Survey teams use technology for speed and precision

Surveyors on the Sea-to-Sky Highway Improvement Project use advanced technological systems including global positioning satellites (GPS) and radio links from field survey equipment to office computers. For years the optical transit (the instrument used to measure both horizontal and vertical angles) and a pole or 'target' were used to lay out property lines or highway alignments. Crews relied on radios to move the target into position and record measurements. By the 1970s electronic devices began to replace the transit since they could more precisely measure angles on both the horizontal and vertical alignments. In 1990 the addition of automatic tracking and integrated radio communication allowed data collection at the "target." Called 'total robotic stations'; for the first time no person was required at the instrument – only at the pole. The instruments provide both upload and download capability to the designer's computer-aided drafting (CAD) computers, who turn the data into highway designs.

P.S. *Surveying in what is now British Columbia began when Captain James Cook from his ship the "Endeavour" charted Nootka Sound in 1778. In 1792 a Spanish and British expedition under Captain George Vancouver cooperated in charting much of Georgia Strait and Puget Sound before sailing to Nootka Inlet to discuss ownership of their new found claims.*



Using servo-motors, prisms and infrared technology robotic total stations search for, and then lock onto, the target, automatically following it as the layout person moves it around a job site.

The Sea-to-Sky Highway Improvement Project *Improving safety, reliability and capacity*

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